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AMERICAN CINEMATOGRAPHER

The Motion Picture CAMERA Magazine

June, 1937

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by
American Society
of Cinematographers

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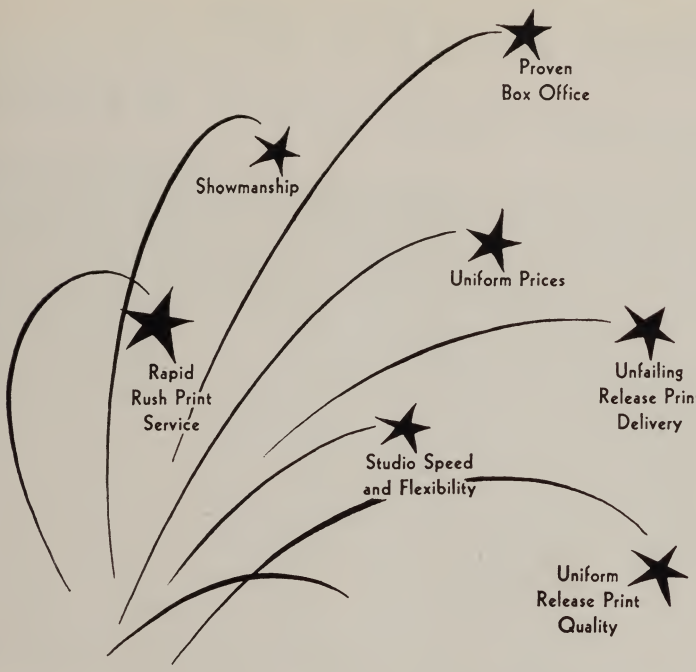

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Motion Picture Corporation

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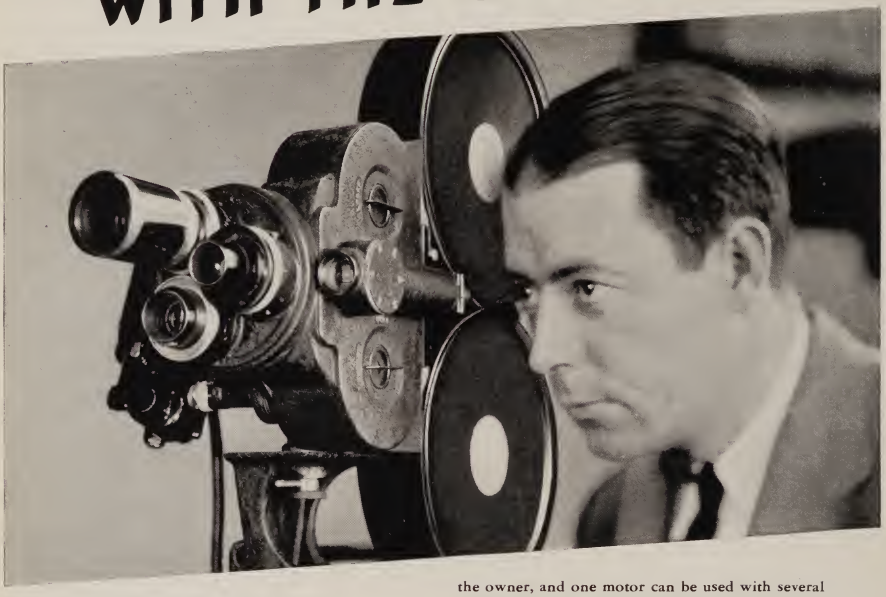

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A GREAT CONVENTION

By George Blaisdell

IT WAS A great convention, that gathering of the Engineers. Oldtimers there are who are prepared to assert that of the forty conventions that have been held this one topped the lot. And while not inclined to blow any horn for any town—not even for New York, and we lived there a lot of years—if the convention proved to be a success it was not in spite of it being held in Hollywood. The ones in the know will tell you it was because of it.

▼

ROSTRUM PRESENCE

FOR UNUSUALLY effective delivery of a technical paper the orchids are undoubtedly due John Forest of the home office of Agfa, who on Tuesday morning enlightened the delegates to the Engineers' convention on "The New Agfacolor Process." To be sure, this writer was present at comparatively few of the sessions, but he has been in attendance at quite a number of others since the organization of the society, and it is his conviction this young man has something out of the ordinary in the way of rostrum presence.

Poise would seem to be Forest's outstanding characteristic, and this is fortified by the earnestness, the modesty without a trace of shyness, the clarity of expression, and the unconscious authority of the scholar who knows his subject.

With fifty years of usefulness easily ahead of him it is pleasant to contemplate what this one man will bring to a great industry in the course of a lifetime. And it must not be forgotten that all over the world working with him are thousands of others.

▼

FILE YOUR APPLICATION NOW

A REPORT not at this writing officially confirmed says that Sam Goldwyn and Alexander Korda have purchased from Mary Pickford, Charles Chaplin and Douglas Fairbanks control of United Artists. The trio named constitute three-fourths of the original organization. The sum reported to be paid the three is in excess of two million apiece.

At the time of the forming of the company—something like a score of years ago—a well-known distributor who from the beginning had been a figure in the industry—going back as far as the song slides, and who today is an associate producer—was moved to make a remark that was widely quoted at the time. He was famous for that sort of wisecracks, and not always were they susceptible of reprinting in a family newspaper.

S. K. WOLF
President, Society Motion Picture Engineers

EPITAPH

If I should die before again we meet
Hail and Farewell I send.
If pain I've caused by thoughtless words unsweet
Contrite my head I bend.
If vagrant flash of me shall cross your mind
I crave your charity:
See me in hours when joy was unconfined . . .
Not in asperity!

He was one of the many who believed then even though he may not now that an actor as a business man not only was not so hot but actually was something exceedingly cold.

And so this former songslide merchant—and in other days that remark belittled nobody—later exchange man, distributor and now producer was moved to remark when speaking of the organizers:

"The inmates have taken over the asylum."

The line for those who wish to enter some similar asylum, draw down fat dividends across a couple of decades and then sell out for better than two million apiece, forms on the right. And don't crowd.

▼

BOUQUET FOR THE SERGEANT

AT THE MAY meeting of the Los Angeles 8mm Club Member C. G. Cornell in the course of a routine report praised Bill Stull's interview in the April and May issues of this magazine with Sergeant Robert Teorey. He declared the Sergeant's cleverness in devising expedients for accomplishing most useful ends in the way of making home movies was worthy of careful study. President F. R. Loscher at the end of the comteeman's report agreed with the previous speaker, saying he hoped every member would be able to read the articles.

▼

A SHOW TO REMEMBER

YOU ARE WARNED in advance so you may discount any seeming enthusiasm that this reporter ever since the days of Kinemacolor has been a nut on color. But what he has on his mind is how Technicolor came into its own on the first evening of the Engineers' Convention. For three hours in the Blossom Room of the Hollywood Roosevelt an audience composed of motion picture experts, the men behind the screen, sat—well, yes, you may be permitted to say when but a quarter of an hour away from under it—enthralled at a program of riches.

Probably never in the comparatively brief history of the motion picture industry had there been such a program offered to a motion picture audience—meaning to a body that is hard-boiled

Continued on Page 264

Officers of the Society of Motion Picture Engineers. Standing, left to right, Sylvan Harris, editor journal of the society; Gordon A. Chambers, secretary-treasurer Pacific Coast section; John A. Aalberg, manager P. C. S.; Gerald F. Rackett, executive vice president; Hollis W. Moyse, P. C. S. manager; Kenneth F. Morgan, chairman P. C. S.; Glenn E. Matthews, chairman papers committee. Seated, H. G. Tasker, past president; J. Frank Jr., secretary; H. Griffin, governor; S. K. Wolf, president; W. C. Kunzmann, convention vice president; M. C. Bastel, governor.

TELEVISION, LIGHTING, SOUND, COLOR STAND OUT AT ENGINEER CONVENTION

TELEVISION, lighting, and standardization of the industry's "push-pull" sound systems highlighted the 1937 Spring Convention of the Society of Motion Picture Engineers held in Hollywood, May 24 to 28. Directors of production and special effects photography outlined their achievements and problems, and the research experts visiting from Eastern laboratories were treated to remarkable demonstrations of the actual technical workings of production in the most successful gathering in the society's history.

Perhaps the first genuinely authoritative discussion of television ever presented in this country was given by Ralph R. Beal, research supervisor for the Radio Corporation of America. Beal described RCA's present experimental television installation in Radio City, from the "Iconscope" cameras in the studio to the "Kinescope" receivers in the home. He stated that at present television broadcasts are faced with the difficulty that the ultra-short waves used have a range of approximately 35 miles.

Fred W. Jackman, A.S.C., reviewed special effects photography from its inception, culminating with a discussion of problems of present-day projection background process cinematography.

Gaetano Gaudio, A.S.C., left the set where he was directing the photography of an important production to attend the session and describe the lighting technique which won him the Academy award.

O. O. Ceccarini presented an exhaustive paper discussing the various color-print processes, accompanied by an exhibit of color prints by the nation's leading color specialists. The new Agfacolor process was discussed by John Forrest, and experts from Dufaycolor, Inc., discussed problems of lighting color, illustrating with motion picture originals and prints filmed by the Dufay process. Technicolor lighting was discussed by C. W. Handley of the National Carbon Company.

Outstanding advances in photographic materials were shown in the

Eastman Kodak Company's two new emulsions for duplicating work, discussed by Emery Huse, A.S.C., and in Agfa's new Type B Infra-red negative, discussed by Wilson Leahy, A.S.C., and Grant Hough.

These papers were lllustrated by scenes contributed by several major studios, in several cases eliciting spontaneous applause for their photographic beauty. Leahy is especially to be commended for announcing the name of the A.S.C. member who photographed each infra-red scene shown.

Whole-hearted cooperation from studio executives and personnel was more evident than at any previous S.M.P.E. conclave. Monday evening's treat in Technicolor is referred to editorially. The Tuesday evening session at the Universal studio was outstanding in its cooperation, while the Thursday evening session, hosted jointly by the Academy and Metro-Goldwyn-Mayer, presented interesting demonstrations of modern sound achievements.

Shapiro Talks of 16mm Sound

The educational, semi-professional and substandard fields were well represented. An outstanding paper on the making of "soft X-ray" motion pictures of small biological specimens was an early feature, while educational film progress and problems were reviewed by S. K. Wolf.

The present aspects of 16mm sound were discussed by A. Shapirc of the Ampro Corporation, and the new S.M.P.E., test-film for testing 16mm sound systems was presented by M. C. Batsel of RCA, using the new sound Kodascope later described by Dr. O. Sandvik of the Kodak Laboratories. The American Cinematographer's special effects prize-winning amateur film, "Nite Life," was screened at this session.

A remarkable array of newly developed equipment and methods for sound recording and analysis rerecording, film editing, developing, projection, and sensitometric and densitometric methods also were discussed and demonstrated by various manufacturers. Included among these contributors may be mentioned several from studios and equipment firms in London, Berlin and other foreign centers.

Ralph R. Beal, research supervisor of Radio Corporation of America, arriving in Hollywood over American Airlines, being greeted by M. C. Batsel, manager of Photophone engineering for RCA. Mr. Beal addressed the S.M.P.E. Friday evening, May 28, on "RCA Developments in Television," winding up the five-day convention.

▼

ADVANCED TECHNIQUE OF LIGHTING ON TECHNICOLOR

Abridged from a Paper Presented at the Spring Convention of the Society of Motion Picture Engineers, Held in Hollywood, May 27, 1937

By C. W. HANDLEY

Western Representative National Carbon Company

A PREVIOUS paper described the studio illuminating equipment used for Technicolor productions in 1935. Since then developments in arc lamps and changes in the Technicolor process have occurred which make possible a considerable advance in Technicolor lighting, which have not only resulted in much better lighting, but in the accomplishment of this result with a considerably smaller number of lamps.

The last report of the studio lighting committee (presented at the Fall, 1936, convention of the society) gives the average light intensity used on black and white sets as 250 to 400 foot-candles, and on Technicolor sets as 800 to 1,000 foot-candles.

During the past year Technicolor has been able to reduce its illumination to approximately the same levels as now used for a great deal of black and white work. These changes have been made possible by the use of more efficient lighting equipment, changes in the Technicolor photographic technique and advances in laboratory processing.

New Arc Lamps

When the first Technicolor three-color picture was made the MR Type 39 twin-arc broadside and the MR Type 27 scoop were the only modern arc lamps available. These were placed around and above the set to establish an even overall illumination tion.

The spotlamps and sun arcs used for creating areas of higher intensity were lamps which had been used for many years on black and white. They did not give an even field, nor were they satisfactorily quiet or suitable as to color quality. Therefore the broadside and scoop were used wherever possible. As a result, many more lamps were used on a set than would have been necessary if modern high intensity equipment had been available.

The MR Type 90 "H.I. Arc" is now

Completing arrangements for annual spring convention of Society of Motion Picture Engineers are William C. Kunzman, National Carbon sales manager, convention vice president, and Glenn E. Matthews, Eastman Kodak, technical editor and chairman papers committee.

used in place of the older 80 ampere rotary spot, the MR Type 150 "Ultra H.I. Arc" in place of the 24" sun spot, and a new 65 ampere spotlight (MR Type 65) developed. The 36-inch sun arc is still used where a deep penetration of light is desired on particularly long throws or where a particularly sharp shadow is necessary.

The MR Type 90 and the older 80 ampere rotary are of approximately the same size and weight, but the Type 90 at a beam spread of 40 degrees delivers over three times the light of the 80 ampere rotary, and at a beam spread of 16 degrees twelve times.

Improvements in the laboratory processing of the film, details of which are outside the scope of this paper, have made it possible to reduce the light intensity on sets by as much as 40 per cent and to change the illuminating technique from that of a more or less flat lighting with a uniform overall light intensity to an advanced color technique with widely varying levels.

Because the lighting of a motion picture set is often a compromise between the cinematographer's desire for a given effect and the limitations of the equipment and process it is difficult to attempt to state the number of lamps required for any given area. The table shows an estimate given by Ray Rennahan, chief cinematographer, of the number and types of units he used to photograph the huge ballroom set of "Becky Sharp," the first three-color Technicolor feature.

In comparison is Rennahan's estimate of the lamp equipment which would be required for the same set under present conditions of lighting. The reduction from the original requirements is apparent.

Type	Used on "Becky Sharp" ballroom set, 1935 Qty. 1935	Corresponding equipment today Qty. 1937
36" Sun Arcs	19	4
*24" Sun Arcs	47	none
†100 Amp. Rotaries	4	none
†80 Amp. Rotaries	87	none
35 Amp. Spots	1	1
Broadsides MR Type 29	71	35
Scoops MR Type 27	78	40
MR Junior Solarspots	12	12
36" Sun Spots	9	5
24" Sun Spots	5	none
18" Sun Spots	5	none
Rifles	5	none
Domes	1	none
Strips	40	none
TOTAL LAMPS	384	167
	Amps.	Amps.
Generator Load at 115 Volts	20,000	12,895

Quantity new Type.
*30 MR Type 150S
†40 MR Type 90S

▼

Engineers See Picture Made Under Hand of Emcee Tasker

ONE of the highlights of the Convention of the Society of Motion Picture Engineers was the Tuesday evening session held at the Universal Studio for which Past President Homer Tasker had enlisted the aid of virtually every studio department in an unusually complete demonstration of "How Motion Pictures Are Made."

The four hundred members and guests of the Convention assembled on the studio's scoring stage which was actually in use at the time recording a pre-scored sound track for use on the morrow's production. This note of legitimacy characterized the entire session.

Following Studio Manager Val Paul's official welcome, Associate Producer Robert Presnell outlined the problems of translating a story into celluloid entertainment. He emphasized the difficulties of adapting stories to fit a program production budget, choosing writers, director, director of photography and a cast, and yet remaining within the allotted expenditure.

Next Bernard Brown, chief music and dubbing mixer, described how song sequences are made by recording first the accompaniment, then the voice while the singer listens to the recorded accompaniment through an ear-phone, and finally photographing the picture to a synchronized playback of the music. To illustrate this Deanna Durbin actually recorded a song from "100 Men and a Girl," singing to an accompaniment she alone heard.

Following this, members of the studio's art department gave a demonstration of the making of set sketches and plans.

Adjourning to a production stage, Joseph Pasternak, associate producer of "100 Men and a Girl," substituting for Director Henry Koster, discussed the director's duties, after

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PROCESS ENGINEERING

Special Effects Cinematography From an Engineering Viewpoint

Abridged from a Paper Presented at the Spring Convention of the Society of Motion Picture Engineers, in Hollywood, May 24th, 1937

By FRED W. JACKMAN, A.S.C.

A MICROSCOPICALLY exact registration is the heart of modern projection process background cinematography, in which a print of any desired background is projected on a large translucent screen behind the foreground set and action, and rephotographed by a foreground camera electrically interlocked with the projector.

It is obvious that any trace of an unsteady picture at any point in this process will destroy the usefulness of the composite scene. If the background plate is photographed in a camera which is not microscopically steady the background of the composite scene will not be steady with relation to the foreground. If the background is printed in a printer which does not register perfectly the same will result. If the projector does not maintain the same mathematically exact register again there will be unsteadiness.

The equally obvious solution is to use pilot pin registration throughout — from background camera through printer, projector and composite taking camera. This is indeed the answer, but only part of it. Modern projected background work demands such tremendously accurate registration that the pilot pins must register through the same pair of perforations throughout every operation.

Dual Arrangement

Our industry is based on the use of two types of camera—the Bell and Howell and the Mitchell. Both are equipped with excellent pilot pin registration systems. But one registers through two perforations above the frame, while the other registers two perforations below the frame.

Clearly if we photograph our background with a camera employing one type of registration and print or project it using the other type we cannot have microscopically perfect registration in our projected picture. The error, viewed from a production photographic viewpoint, might be negligible, but it is ample to spoil the process shot.

For much the same reason certain designers of theatrical projectors who have offered projectors for process service equipped with a side tension register only have gravely underestimated the problem. Such a projector will undoubtedly be abnormally steady for theatrical use, but it is worthless for process purposes.

I have found the commercial answer to this registration problem in the equipment designed and built for me by William Matz of Hollywood. It uses Bell and Howell type pilot pin registration throughout. But each unit — printer, projector, etc. — is equipped with two interchangeable movements, one for use with background plates photographed with a Bell and Howell camera, the other for use with Mitchell-photographed backgrounds. Each has its registering pins working through the same pair of perforations in printing and projecting that were used in photographing the original background negative.

Fred W. Jackman, A.S.C.

Processing Important

Equally important is the laboratory processing of both the original background negative and the projection prints made from it. Any pronounced stretching or shrinkage of the film—negative or print—will play havoc with register. Absolute control of gamma is necessary. Fineness of grain is most desirable. And for the best results it is desirable that there be no directional markings on the film.

I have had excellent results in my own plant from the Roto tank developing system engineered for me by Roy Davidge. This places the film on a large metal reel, sandwiched between spirals of a celluloid apron similar to those used in developing miniature camera film. The reel is laid horizontally in the tank and oscillated between 75 and 85 times per minute.

This gives a non-directional turbulence which produces no measurable directional markings and gives a cleaner cut negative with greatly improved shadow detail.

Incidentally, this method reduces the developing time about 45 per cent and enables us to dilute the developer considerably. There is no strain on the film, so expansion and shrinkage are minimized.

The secret of success in modern special effects engineering is a combination of knowledge and organization. A properly conducted special effects unit, whether a department in a major studio or an independent special effects contractor, must inevitably be an organization of many specialists.

Specialists Necessary

These men must be specialists in much more than photography alone. Practically every phase of studio activity must be represented. In addition to the stage crew of thoroughly competent operative and assistant cameramen, electricians, carpenters and grips—all experienced not only in production but in special effects technique—presided over

Continued on Page 244

THE ANSWER

EASTMAN'S coöperation with the industry has helped to solve many a problem of motion picture technique. Now it supplies a complete answer to the important duplicating problem. Eastman Fine-Grain Duplicating Positive and Negative Films are capable of producing duplicates actually indistinguishable from originals. Eastman Kodak Co., Rochester, N. Y. (J. E. Brulatour, Inc., Distributors, Fort Lee, Chicago, Hollywood.)

EASTMAN *Fine-Grain*

DUPLICATING FILMS

TECHNICOLOR BRINGING NEW CHARM TO SCREEN

What Company Has Achieved Through Capacity for Taking Infinite Pains in Details Minor as Well as Major Demonstrated in Preliminary Showing of "Walter Wanger's Vogues of 1938"

By WILLIAM STULL, A.S.C.

IT WAS RECENTLY the writer's privilege to view the first cut of the Technicolor production, "Walter Wanger's Vogues of 1938." Inter studio gossip had more than intimated that this picture would establish a new high for the perfection of color. But since few if any of the gossipers were cinematographers I had taken these advance praises with the proverbial grain of salt.

Too frequently in the past have non-technical persons gushed about color "achievements," which when viewed with the scientific detachment of the cinematographer turned out to be no achievement at all. Despite active membership in Hollywood's clan of color enthusiasts I had to be shown conclusively that this latest Technicolor production was the achievement claimed.

It is.

Eleven reels of outstandingly fine color proved it. Viewed either from the technical or the artistic viewpoint, they were eleven reels of the finest color I have ever seen produced by any subtractive process. The flesh tones were, for almost the first time, natural. The reproduction of the tones and textures of fabrics, costumes, walls, and the like virtually were perfect. Definition and color balance were not only excellent but remarkably consistent. And the picture passed with flying colors the ultimate technical test of any color process: the whites were genuinely clean white and the blacks honest blacks.

The most outstanding surprise, however, was the fact that what I saw was eleven reels of daily prints, delivered almost as quickly as though they had been black-and-white rather than color. During the past year I have seen preview prints and release prints (both black-and-white and color) of poorer quality and consistency than these "rushes."

Battery of optical printers which print Technicolor matrices.

What Process Involves

My natural inquiry as to what proportion of the footage I saw represented reprints was answered by the statement that, out of more than 70,000 feet of color rushes delivered to the producer, less than 709 feet of reprint had been required. My informant added that the relatively few scenes I had commented on as seeming slightly below the standard set by the body of the picture could be and inevitably would be corrected in the more careful balancing of release print making.

To anyone who has made even a slight study of the technicalities of motion picture color this achievement seems wellnigh incredible, for Technicolor's three-color process is inherently a highly complicated affair. At the risk of boring those already familiar with the process, it may be well to outline briefly what is involved.

Three-color Technicolor is photographed with a special camera which exposes three negatives simultaneously, through a single lens. Immediately behind this lens is a beam splitter made by joining two prisms of optical glass, the joined faces being silver-sputtered to produce a partially reflecting mirror. This beam splitter reflects part of the light to an aperture at the left of the lens, and allows the remainder to pass through to a normally located aperture.

Three specially hypersensitized films pass through these two apertures. In the rear aperture, a single Super-X Panchromatic film is exposed behind a green filter. In the left aperture a standard bipack is exposed behind a magenta filter. This filter

transmits both red and blue light, but excludes green; the front film of the bipack, being an orthochromatic emulsion, records only the blue components. It carries a red-orange dye which absorbs the blue rays, leaving only the red to affect the rear film of the pair, which is of course panchromatic.

Processing Problems

After the three negatives have been developed, each to its appropriate gamma, each must be printed in its appropriate color, and the three color images must be assembled on a single strip of film, superimposed one over the other and in microscopically exact register.

Technicolor's method of printing is known as "imbibition printing." Fundamentally it works like a rubber-stamp: a relief image is moistened with a colored dye and then brought into contact with the film which is to carry the final print, on to which the dye is transferred.

Precisely as in using a rubber stamp the ink is not transferred to the paper by the low portions of the rubber, but only by the raised parts, so in this case the dye is transferred only by the raised parts of the relief image. These "matrices," as they are called, are made by printing from the three negatives upon a special film coated with a special emulsion instead of the conventional emulsion.

When this is "developed" in warm water, the picture is reproduced in varying thicknesses of the gelatin. The portions affected by the printing light—in other words, the shadows—remain unchanged; the parts only partially affected—that is, the halftones—are partly removed, and the unaffected parts—the highlights—are completely washed away.

Three-color Printing

Once the matrices are made the first step in making a Technicolor print is to prepare a black-and-white blank on normal positive film. The sound track is printed in the usual way at this time This is developed, washed and fixed in the usual manner.

The three matrices are then dyed, each receiving a dye of a color complementary to that of its taking filter. The red filter negative's matrix is dyed cyanin blue-green; the green filter negative's matrix, magenta; and the blue filter negative's matrix, yellow. This seems illogical at first, but it is actually necessary, for we are making the print from the thinner portions of negatives.

Suppose we photograph a red object. In the red filter negative the image of this red object will be very dense; in the other two negatives the red will be represented by very light images.

In our prints, the red object, printed from the red filter negative, will be virtually a clear white; in the prints from the other two negatives, it will be an extremely dark gray, almost black. If we transferred from such matrices with dyes of the same colors as the taking filters, our red object would receive no red dye, since that area of its matrix would be a hollow—but it would receive deposits of blue and green.

Physical Problems

Therefore to get our color-print as it should be we print the red filter matrix with a dye that is "minus-red," or blue-green; the blue filter matrix with a "minus-blue" dye, or yellow; and the green filter matrix with a "minus-green" dye, or magenta. We get no blue-green impression of our red object in the first case, while the combination of the yellow and magenta dyes results in red, for the yellow filters out the blue-light component of magenta, and leaves only red light.

The result is the red image of the red object which we wanted. The other colors are produced in the same way, while white is an absence of any dye-image and black is an equal combination of all three.

The physical problems of printing these three dye-images in exact register with each other and with the black-and-white key image can be imagined, especially when the inevitable shrinkage and expansion of the several films are added to the problem. It has also been a big problem to keep the transferred dyes in their proper places.

Modern Speed and Quality

By any reckoning, the problem is not inherently simple. It is hardly to be wondered that Technicolor prints were traditionally expensive, slow in delivery, and sometimes badly wanting in definition and consistency. The wonder is that they were not more so.

Today, as judged by the evidence presented in Wanger's projection room, these difficulties have been almost completely overcome. The quality and consistency of modern Technicolor prints would be enviable even for black-and-white. They are delivered on a schedule scarcely behind that of any black-and-white laboratory. And finally, Technicolor release prints show a uniformly high quality that should give pause to the technicians turning out the average black-and-white release print.

Many Factors Contribute

Searching for the reasons for this amazing improvement, I first questioned J. A. Ball, Technicolor's technical director. "The improvements we have made recently cannot be credited solely to any one department or to any one phase of the process," he replied. "It has been more a matter of cumulative, relatively small improvements all along the line, each adding to the other like compound interest until the sum total is large.

"Right at the start of the chain the lighting equipment we have had on

Testing laboratory where results of dyeing operations are checked.

our recent productions, specially engineered for the purpose by Mole-Richardson, is unquestionably more modern than that generally available for black-and-white. The negative films we use have been improved in detail. Our cinematographers, always capable artists and technicians, not only have gained more experience with the process but have been able to work more freely both because of these factors and because of a similar chain of detail improvements made in the laboratory under the management of Gerald Rackett.

"We have learned how to develop our negatives to what a black-and-white technician would call more normal standards. This is due principally to the fact that improvements in printing methods and printing control have made it possible to use a thinner, more normal negative and to get better prints thereby.

"Because of all these improvements such related external factors as make-up and art direction we have been enabled to improve. With all these factors improved we in turn get better pictures."

Technicolor Camerawork

Ray Rennahan, director of photography on "Wanger's Vogues," in his turn gave the lion's share of the credit to the behind-the-scenes staff in laboratory and research work. "Technicolor camerawork," he said, "is still fundamentally the same. The difference is that thanks to the improvements made in the film and its processing the cinematographer has a more free hand with which to work. We can do things today which we could not have done a relatively few months ago.

"To start in at the beginning, between the improvements in film and processing the process is considerably 'faster' than it used to be. That means that we can use a great deal less light than was formerly necessary. Moreover, we now have better lamps in the H. I. Arcs and Ultra H. I. Arcs which give us more light than the old sun arcs, and give it in a more usable beam. That means that we can use fewer units and simpler lightings.

"It also means that there is less 'spilled light' to rely on for general lighting. Our lighting must be done more accurately.

"One thing that almost every cinematographer who visits a modern Technicolor set remarks is that the large numbers of Side Arcs and overhead 'Scoops' that used to be so noticeable have almost vanished. With more efficient spot-lighting units and a process that is 'faster' overall, we don't need them so much.

Lighting Near Usual

"We use the side arcs just about as extensively as a good black-and-white cinematographer uses incandescent broads—for an occasional fill-in light or for flat frontlight in close shots. We use the scoops about the way the same monochrome cinematographer would use overhead inkie strips—to help out on extremely large sets where we are filming dance numbers and the like.

"The actual lighting level now used in Technicolor is extremely close to average black-and-white standards. Unit for unit our arcs probably give more light, but it is easier on the eyes and cooler to work under, so it is not nearly so noticeable. For effect lightings we are probably right down to black-and-white standards.

"I have never subscribed to the common belief that color demanded flatter lighting than black-and-white. Even when the three-color process was new I held that color did not lend itself well to flat lightings, but gave the best results with lightings slightly more brilliant than I would use in black-and-white. With a faster and more responsive process I now light almost exactly as I would for monochrome. The highlights do not have to be watched as closely as they did a little while back, and shadow detail is also more easily preserved.

"As to the speed with which a color troupe can work—that depends on the troupe, not on the color. On the Wanger picture we averaged seventeen set-ups a day over the whole schedule. One day we did as many as forty-two!"

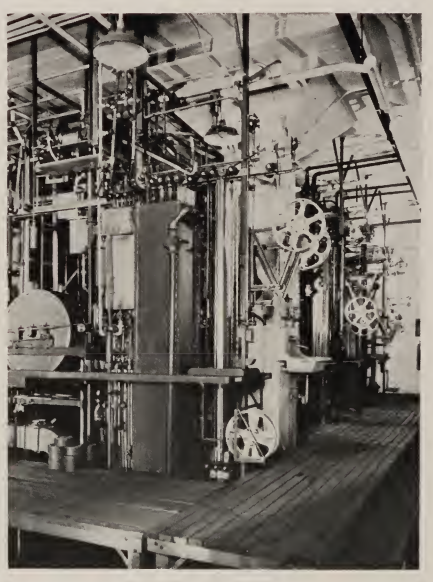
Rackett Praises Staff

In the laboratory, Plant Manager Rackett paid tribute to his staff. "They're the ones who actually do it," he said, "my task is simply to see that they do it as efficiently as possible. I came into the organization seven years ago with a background of practical engineering, but no preconceived notions of how colored pictures should be made.

"I have simply tried to organize things so that we could do the best possible work on a commercial schedule, at a commercial price. As I see it, that matter of doing the job commercially is the difference between research and engineering. I've simply tried to engineer our laboratory procedure.

"If we don't turn out prints that reflect the capabilities of our cameramen and their tools, it's bad engineering on our part. If we turn out unsatisfactory daily or release prints which have to be replaced, again it's bad engineering. If we find ourselves wasting time through poor routining of operations, or effort through overlapping duties or responsibilities, it is bad plant engineering.

"The problem may, as in this case, be inherently complicated. But if we apply the correct engineering methods to its solution we must sooner or later come to a solution that eliminates or at least minimizes those difficulties. In this particular case, we have an advantage over our colleagues in the research staff and on the set for we are, for the most part, working with known facts rather than variables, and we should be able to reduce them to a matter of orderly, efficient commercial practice. I think we are doing it—but see for yourself. The best way to de-



Transfer machines which imbibe dye-image from matrix to blank.

cide is to go through the plant and see how it's done.

High Scale Efficiency

The Technicolor laboratory is a remarkable example of production efficiency. Nothing about it gives the impression of haste, yet the operations are scheduled from one step to the next as accurately as trains on a busy main line. If, for example, the final positive or blank of Wanger's Scene No. 213 is scheduled to make connections with the blue printer matrix at 3:20 this afternoon, blank and matrix will reach the appropriate machine at 3:20 without delay or confusion.

To guard against any unforeseeable mischance at any stage of the process a tolerance of 15 minutes is allowed at each control point. This permits sufficient leeway to care for virtually any contingency without risk of delaying the plant's schedule for other film, or of getting that scene into the producer's hands later than the hour promised.

Negative from Technicolor's camera department is received in the negative developing department and developed to rigid standards. After substantially normal negative processing routine the three negatives are routed to the negative cutting section, where the scenes to be printed are segregated.

The negatives are next submitted to familiar but unusually exacting densitometric tests, and the best printing times determined. This is done by accurate measurement rather than by visual inspection.

Printing Details

The three matrices and the black-and-white blank are then printed according to these specifications. Each print passes through its appropriate developing machine and emerges on schedule, ready for the transfer. In this operation, the blank is fed into a remarkable transfer machine in which the matter of registering the dye-carrying matrix and the black-and-white blank is taken care of by remarkably exact machinery which brings the two together, in register, under a large roller exerting a known pressure.

The matrix and blank are then carried through the machine and held in register during the transfer of the dye image. This is done at a predetermined ideal time and under fixed conditions of temperature and humidity.

The transfer is repeated twice more, while the magenta and yellow images are imbibed. Then the completed three-color print is delivered to the far from tender mercies of a relay of inspectors who report on every possible detail of the print, accurately record their findings, and make sure the print adheres to the desired high standards of quality.

The procedure for release prints is fundamentally the same. Before release prints are made, of course, the three negatives have to be cut to match the positive as cut by the producer's film editor, and the various scene negatives imprinted with indentifying edge marks.

'Answer' Precedes Master Print

As is usual, an answer print is then made from the cut negative. This is carefully analyzed by representatives of Technicolor's laboratory, camera department, etc., and the producer's staff. When every detail of print quality has been determined the master print is made and filed.

Prints identical with the master print are made for reference purposes. These include two-thirds of the footage of each release reel. As each release print is completed it is taken to one of the laboratory's four inspection rooms. Here the release print is projected under standard conditions, while the reference print is projected directly beside it, in synchronism.

The inspector makes a written report of each scene in the release print, stating its condition as to definition, uniformity, density, color balance, contrast, and a dozen other items. If the print passes this inspection, which is the last of a series of four, it is shipped to the designated exchange. If not, that print does not go out, and immediate inquiry is made as to the cause of the imperfection.

It is interesting to note that in making Technicolor release prints the original negatives are handled far less than is the case in black-and-white. The negative is printed once to make the daily matrices; again to make the answer print matrices, and once more to make the master print matrices.

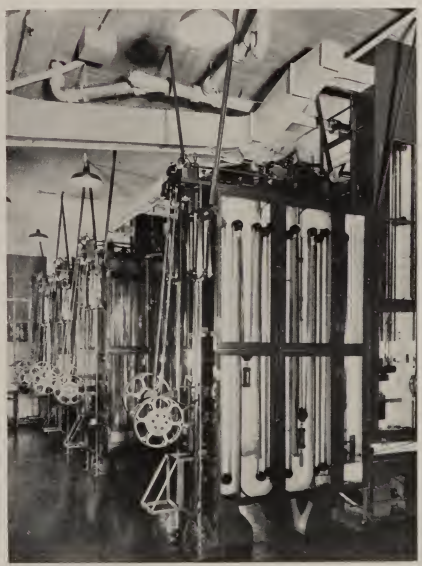
Matrix Life Prolonged

Then a set of matrices is made for release print making and a dupe negative of the green filter negative made for printing the blanks. Thereafter the negative goes to the vaults and release printing is done from the matrices and the dupe. The useful life of matrices has been enormously improved—seventy-five or more printings from a single set is now common. But when the first sign of deterioration is observed, a completely new set of matrices is made, and printing goes on.

If recently published reports to the effect that 509 release prints are being made of Selznick-International's "A Star is Born" are true, the original negatives will be printed scarcely more than ten times for the entire half million feet plus the inevitable daily answer and master printing!

Eight years ago Technicolor encountered a sudden boom which severely overstrained the capacity of the laboratory. Experience was a good teacher, it seems, for all of the firm's executives have resolved never to let this happen again. Currently, the plant is operating with a volume equal to about 55,000,000 feet a year.

Recent reports indicate commitments likely to bring the season's total up to more than 60,090,000 feet. But according to Rackett, the plant's maximum capacity without increasing equipment or personnel, is



Take-off end of the matrix developing machines.

Continued on Page 242

ERICKSON DESCRIBES TRIPLE 5 STUDIO SPOT

By CARL R. ERICKSON
Illuminating Engineer

THE WORLD of science has at one time or another in the last fifty years touched practically every line of human endeavor and interest. It is incredible, however, that when motion pictures, among the world's latest big brain childs, were started no basic engineering was done to produce adequate lighting equipment for the cameraman. The industry copied identically the old army type searchlight, converting it into its combination flood and spot light.

For reflectors in these units parabolic mirrors of focal lengths commercially available at the time were used regardless of their adaptability to the equipment, and are, unfortunately for those who use them, accepted as standard. With the advent of talking pictures the arc lights were replaced by incandescent. However, the fundamental design of the units was in no way improved.

It was not until about three years ago that actual original research in motion picture lighting equipment design was attempted. The first result was quite simple, namely, a light source the beam of which was controlled by an echelon or Fresnel type lens. The first lamps of this type were good, but, as is often true of new developments, contained many defects.

Uneven distribution of field, side leak light from the lens, and difficulties with back spherical reflector adjustment are among the problems presented by these first small spotlights.

Two Control Methods

However, it is now possible to purchase studio spots which are light in weight, contain a lens giving an even distribution of light and treated to kill leak light absolutely and also containing a back spherical mirror rigidly adjusted at the factory which cannot get out of focus. Among these are lamps known under the trade name of "Keg-Lite."

Let us consider for a moment the means for controlling light and their relative efficiencies. There are two fundamental methods of controlling the luminous flux emitted by a light source: first, by refractian through a lens system, and second by reflection from a mirror.

The first method, refraction, has been mentioned. This is the ideal method for small key lights, say, up to and including those using the 2000-watt globe, if we focus our attention on incandescent units. Exclusively refracting units present serious difficulties if carried to higher wattage.

High Wattage Problems

The first is the problem of globe heat. The softening point of glass is near 1050 degrees Fahrenheit. A 5000-watt globe will approximate this temperature, and unless the heat is carried off by adequate cooling the globe will take on bulges or blisters at the points of most heat concentration.

In floor lamps around a camera compactness and lightness are essential. Hence the low wattage "Keg-Lites" are ideal for this use. But for the more powerful lamps which are used high on the sets for back lights and general lighting the most efficient units possible are desired.

This brings us to the second problem of high wattage refracting units, namely, their low lighting efficiency as compared with reflecting units. The transmission of incandescent light through Pyrex glass three-eighths of an inch thick is 58 per cent of the light incident upon the glass. The great loss is due to reflections at the two surfaces and to absorption by the glass itself. This figure applies to the glass used in making echelon or Fresnel type lenses contained in studio spotlights.

If, on the other hand, we turn to reflecting surfaces, we find that chromium reflects 62 per cent and silver on glass, second surface, from 80 to 85 per cent of light incident upon them respectively. Hence the 24-inch studio lamps using either glass or metallic mirrors emit a higher percentage of the flux incident upon their light projecting member than do units employing a lens only.

Two Systems Combined

Since the 24-inch sunspot is the most widely used lamp throughout the studios for larger sets requiring a long throw, the adaptation known as the Triple 5, developed by Bardwell and McAlister, Inc., and which can be adapted to the old type 24s now in use, was designed to increase the efficiency of the 24-inch lamp in the center of the field, its weakest area.

Extreme care was taken in placing each member of the new optical system so as to retain the old feature of

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reflecting light directly from globe to mirror to the field characteristic of the old 24s. By this method the light was not merely redistributed, but new light was added to supplement that already present in the old 24s.

In the T-5 there is a combination of two optical systems. In any device employing two independent movements greater flexibility of adjustment can be obtained than is the case with only one movement.

Hence in the T-5 it is possible to obtain a more uniformly lighted field than is possible with a single movement lamp. This combination of a differential motion with an open face lamp employing direct reflectors is why the T-5 will give three times as much even flood light as any other unit of equal wattage.

Tests have proven that a 2000-watt globe used in this new equipment produces the same light intensity on flood as a 5000-watt globe in the old 24 as well as smoothing the field and eliminating the black spots. Most of the studios which now have this type of equipment are using 2000-watt globes, thereby cutting their globe cost and current consumption in half.

It is our belief that the T-5 is only the first step in a complete revolutionizing of the fundamentals of studio lights in the interest of greater lighting efficiency.

▼

How Pictures Are Made

Continued from Page 231

which Electrical Supervisor Frank Graves told how the electricians rig a set for the cinematographer's lighting.

Joe Valentine Obliges

Joseph Valentine, A.S.C., and his camera crew illustrated the lighting and photographing of a longshot and a close-up. For these Deanna Durbin and Mischa Auer went through a scene to a playback of the song previously recorded. Director of Photography Valentine gave an excellent demonstration of his lighting technique.

When a member of the audience asked how it was that Valentine was able to light his set so quickly, Supervisor Pasternack replied for him that he was repeating a shot already made for the production—and that on a fresh set-up Valentine would require almost five minutes longer!

Returning to the scoring stage the group viewed the projection of "rushes" of the sequence demonstrated, after which Supervising Film Editor Maurice Pivar told how films are edited.

Where Noise Comes From

Musical Director Charles Previn apologized for having to speak extemporaneously, and proceeded to give a most amusing and highly informative discussion of how music is tailored to fit a picture, illustrating by showing a sequence from "Wings Over Honolulu" with two different accompaniments which altered the dramatic meaning of the action completely.

In conclusion Edwin Wetzel, dubbing mixer, demonstrated how music, sound effects such as crowd noise, incidental singing, thunder, rain and airplane motor roars are "dubbed" into the sound track recorded on the set. In his demonstration eight different sound tracks were combined to give meaning to another sequence from "Wings Over Honolulu."

This demonstration of the details of picture making was one of the most complete ever offered to any group by a Hollywood studio and reflects the greatest credit upon the spirit of the New Universal from executives down to the unseen electricians, sound men and others who participated behind the scenes, and upon Past President Tasker, who organized and directed this most unusual demonstration.

▼

BACH ATTENDS CONVENTION

W. A. Bach, managing director of Western Electric Company, Ltd., London, was in Hollywood attending the convention.

J. P. Maxfield of the New York office also was in Hollywood attending the convention.

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A.S.C. ON PARADE

• **Virgil Miller, A.S.C.,** for the first time in eight years is shooting on straight production. He is at Twentieth Century-Fox photographing "Danger—Love at Work," featuring Simone Simon. For many years he was at the head of the Paramount camera department. Recently he has photographed special effects on "The Garden of Allah" and "Little Lord Fauntleroy."

• **Karl Freund, A.S.C.,** while photographing Greta Garbo in "Madame Walewska," took advantage of a production lull to slip downtown and take out his final citizenship papers. On his return to the set he found the leading woman had arranged for the decoration of his camera with an American flag and for an orchestra to greet him with "The Stars and Stripes Forever." The player herself remains a Swedish subject.

• **J. Dev. Jennings, A.S.C.,** took the honors at Paramount's golf tourney, winning over 246 competitors. He turned in a par score of 71.

• **Oliver Marsh, A.S.C.,** and **Jack Smith, A.S.C.,** left Hollywood May 20 for Lone Pine to photograph backgrounds for M. G. M.'s "The Firefly."

• **John Mescall, A.S.C.,** has been seized with a golf thought—in fact, two of them. And when John has anything like that percolating his system the golfing multitude which never has been able to approach the heights which he takes so easily sits up in the hope of getting a straight and useful tip.

"Driving is a science," suggests John, "irons are an art, and putting is an inspiration.

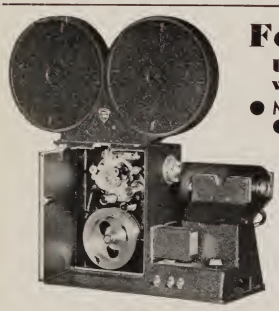
"Golf seems to be a game of opposites," he goes on. "For a right hand player to hit from right to left across the line of play causes the ball to slice. In other words, by hitting to the left you go to the right. From left to right across the line of play causes a hook or pull. That is, by hitting to the right you go to the left. To hit down on your ball makes it go up. To hit up on your ball makes it go down or fly low."

• **Ted Sparkuhl, A.S.C.,** and a Paramount technical crew slipped across country to New York during May to film scenes with Kirsten Flagstad, opera singer, for "The Big Broadcast of 1938." The scenes were shot at the Astoria plant in Long Island City.

• **Ernest Haller, A.S.C.,** starts June 14 on "The Great Garrick" at Warners. James Whale directs.

• **Elmer Dyer, A.S.C.,** had a busy month in May. On the 3rd he left for Louisville to join an M.G.M. outfit shooting backgrounds in the Bluegrass country for "One Came Home," regular production on which was due to start early in June.

When that job was finished he was ordered home by plane. Then he was notified he was to leave in four days, on the 22nd, for New York and thence to London. There he was scheduled to do air work for the company making M.G.M's first British subject and also incidentally by an English troupe. Mrs. Dyer accompanied.



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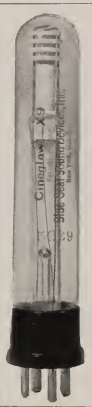

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• **Joe Dubray, A.S.C.,** sailed for Europe May 24. He had been awaiting sailing orders for quite some time. The veteran cameraman and technician will represent the Bell and Howell factory in England, France and Europe generally. No definite time has been set for his return.

• **Joe Valentine, A.S.C.,** shooting "A Hundred Men and a Girl," found himself just one of a host of Joes. For instance, there was Joe Lappis, the sound man; Joe Pasternak, the associate producer, and even the gaffer responded to no name but Joe.

• **Harry Perry, A.S.C.,** whose talk to the Associated Motion Picture Pilots was printed in the May issue of this magazine, left Los Angeles May 27 on assignment from Paramount. His first stop will be London, where he will prepare to photograph background shots at the Ascot races for Paramount's "Angel."

Following completion of this assignment he will visit Paris, Vienna, Nice and Prague to photograph backgrounds for Ernst Lubitsch's "Bluebeard's Eighth Wife," for Paramount, of course. If Harry wearies of his assignment and wants to come home there is a chance, remote possibly but nevertheless a chance, some reluctant brother-member might be cajoled into helping him out by finishing the job.

• **Harry C. Neuman, A.S.C.,** has been assigned to photograph Sol Lesser's "The Californian."

• **Victor Milner, A.S.C.,** took a crew to New Orleans for preliminary work on DeMille's "The Buccaneer" for Paramount.

• **Charles Marshall, A.S.C.,** and **Clyde De Vinna, A.S.C.,** have returned from Louisville, where they were working on backgrounds for M.G.M.'s "One Came Home."

• **Charles Clark, A.S.C.,** assigned to M.G.M.'s "General Hospital."

• **Al Gilks, A.S.C.,** had a chance to get a look-see at "Thunder in the City," when it was shown during the month at the Paramount Theater. The subject was one he photographed for Atlantic Films at the Alexander Korda studio in Denham, England.

• **Charles W. Herbert, A.S.C.,** who has been on a long assignment in the Orient for March of Time, arrived in Hollywood by way of Honolulu and interrupted his vacation to remain for the Engineers' convention. On its conclusion Charlie, accompanied by Mrs. Herbert, slid away for a couple of months in his Montana mountain home.

• **Georges Benoit, A.S.C.,** public relations committeeman in Paris for his organization, writes from Cairo, Egypt, that he will be in that city until the middle of June. He was called there by the Egyptian Abdel Wahab for a picture. The studio is well equipped. While the weather is warm Georges states work starts at 4 P.M. and stops at 1 A.M. And he sends his regards to all.

• **Willard Vander Veer, A.S.C.,** winner of an Academy award for photographic achievement in 1930, winner of a Congressional Medal, both on account of his work with Byrd in the Antarctic, has received word he has been chosen a Fellow in the Royal Photographic Society.

REFLEX FOCUSER FOR C-K SPECIAL

A reflex focusing attachment for the Cine-kodak Special is announced by Hugo Mayer. The device is intended especially for use when 200-foot magazines are used, when the Special's regular reflex focuser cannot easily be viewed.

The new attachment consists of a double reflecting element which reflects the image seen in the reflex focuser upward, to the right and then through a magnifying telescope to a convenient position at the rear of the camera. It may be used also with standard 100-foot magazines.

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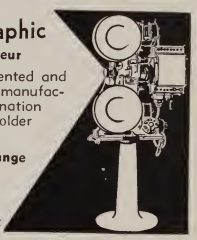

Precision in Lighting

Solarspots

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New Leica Projector

With simple "one shot" methods of color photography coming more and more into prominence for amateur use greater emphasis has lately been placed on projection, for that is one of the best manners in which color transparencies such as Kodachrome can be enjoyed. In addition, the projection of black and white studies reveals details and depths of tones unsuspected in a paper print.

For the proper projection of color transparencies a projector must meet certain requirements both in connection with its optical system and ventilation. The screen image must be brilliant and sharp, and the ventilation such that in normal use the delicate colors of the transparency are not destroyed by the heat. Projectors meeting these requirements are usually designed for use by lecturers and in large halls and consequently not very adaptable for home use.

The new Leitz VIII-S Projector, made by the makers of the Leica camera, was designed with these considerations in mind, and while it gives a brilliant image for use with moderately large gatherings it is also adaptable for home use. It employs a 250-watt bulb.

▼

Agfa Ansco Now Building Hollywood Office Plant

Agfa Ansco Corporation has completed plans for construction of its own building to provide greater service to producing companies and customers in Hollywood. Rapid expansion of Agfa business during the past two years necessitated that larger quarters be obtained, and a two story structure is now going up at the corner of Cole avenue and Santa Monica boulevard.

Plans provide for large research laboratories and spacious warehouse in the rear of the first floor, with loading platform at the entrance on Cole avenue.

Coast headquarters of Agfa Ansco Corporation will be housed in spacious offices on the ground floor, while the entire second floor will be used for offices of C. King Charney, Inc., exclusive distributors of Agfa motion picture film in the United States.

Technicolor Brings New Charm to Screen

Continued from Page 237

in excess of 75,000,000 feet of first-class color per year.

The recently opened Technicolor Laboratory in London will add a further 25,000,000 feet a year to this capacity, bringing the present maximum of good Technicolor to more than 100,000,000 feet a year. Dr. Herbert Kalmus, Technicolor president, is now in England inspecting this plant which, in addition to serving European producers, will print foreign releases of American-made Technicolor productions at a considerable saving in shipping cost and duties.

Hundred Million Feet Capacity

The factor of safety is paramount throughout. All of the machinery is disassembled, inspected and overhauled every week. Exhaustive tests are made daily to ensure consistency of the chemical operations. The technicians are thoroughly trained in the routine and methods of the plant, and work under regulations which, while perfectly logical, are aimed to eliminate duplication of effort and snap judgments.

There is no restriction against making constructive criticisms of any phase of operation. The cardinal sin is saying "I *think*," but if you can bring concrete facts that change the "I think" to "I know" those facts will be listened to.

For this reason the man who makes a mistake in his work is invariably the first to report it, for a normal mistake will not be held against him. Instead, it will perhaps lead to an improvement in methods, equipment or routine which will make its repetition impossible.

And there, underlying the array of amazing precision machinery and the timetable scheduling of operations, lies the final—and by no means least—factor in the steady improvement in Technicolor technique!

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A Great Convention

Continued from Page 228

when it comes to screen entertainment.

The setting was not in one of the present day palaces designed for the superb reproduction of the results of the highest studio skill. It was projected by necessarily hastily planted apparatus and reproduced on a screen that was temporary. In other words the every-day duty of the improvised theatre was that of a high-class dining room.

Just listen to a recital of the program: The curtain raiser was Fitzpatrick's "Rocky Mountain Grandeur," with vocal and instrumental sound accompaniment. Then there were a half dozen other shorts, one after another five Walt Disney's Academy Award winners, beginning with the 1932 decision. There were "Flowers and Trees," "Three Little Pigs," "The Tortoise and the Hare," "Three Kittens," and "Country Cousin."

Bruce Knows Outdoors

And then came Robert Bruce's "Trees," bearing the Paramount brand. There was a musical background, and of course it could have been nothing other than the accompaniment vocal and instrumental that so splendidly fits Joyce Kilmer's deathless words. Bruce has never been topped in his short scenics—he never was in the black and whites, when his troupe was composed not infrequently of one other man and a dog—one man to photograph the other man and a dog.

To the lovers of nature—and dogs—those pictures may have been seen twenty years ago, but the memory lingers on. In this recent picture his selections of outstanding trees and bits of scenery behind and around them, every shot a lesson in composition, are memories.

The conclusion of the program was Selznick-International's "A Star Is Born." It was a fitting and a gripping, a thrilling and a moving, finish

Ask any of those who crossed the country and were fortunate enough to catch that Monday evening's entertainment among their list of events scheduled and otherwise, and if they don't say the night was pretty near worth the trip then you may say we have been fooling you.

▼

GOOD NEWS FOR GOOD MEN

THE EXECUTIVES of International Cinema, Inc., Hollywood film laboratory company—among the better known of them being the veteran H. T. James, Jack Snyder and Jack Guerin—are receiving congratulations on the completion of a contract to handle all film work for Grand National Pictures.

It is one of the largest contracts of its kind signed in the industry this year and is expected to increase by approximately $400,000 the gross income to the company's revenues for 1937. And it is good news to the many who admire and respect these men we have named.

▼

PRATTS SAIL FOR ENGLAND

Mr. and Mrs. G. C. Pratt sailed on the Berengaria for England May 20. They will be absent from Hollywood for approximately two months. Mr. Pratt is vice president of Electrical Research Products, Inc.

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HOLLYWOOD, CALIFORNIA, U. S. A.

Process Engineering

Continued from Page 232

by a director of special effects photography, there must be specialists in the design, building and painting of miniatures and full scale sets and props; molders, riggers, art directors, draftsmen and the like.

There must be laboratory technicians skilled in the most exacting types of negative and positive film development, printing, multiple printing, optical printing, dye toning, dupemaking and sensitometry.

There must be cutters, projectionists and clerical workers, all of whom know not only ordinary studo routines but special effects work. Over all must be a thoroughly experienced chief who is at once a highly trained technician, a salesman, a director and an executive.

At his disposal must be not only the services of this varied and highly skilled personnel, but also a plant ample to take care of the physical requirements of the work and access to an ample library of specially photographed background scenes from all over the world.

This matter of organization is what marks the final difference between the "black magic" pioneering days of special effects cinematography and today's commercial special effects engineering. The early "trick cameraman" did much of his work almost single handed.

Today's special effects specialist could probably do so as well—but he doesn't, because it is more efficient to utilize the advantages of organization.

Without this organization special effects cinematography would still be possible, but it could not be the commercial asset it is today.

▼

ACADEMY SURVEYS RADIO

The Academy Research Council committee on short wave radio communication, under the chairmanship of E. H. Hansen of Twentieth Century-Fox Studios, has started a survey to determine the amount of radio transmitting and receiving equipment owned by the major studios and the extent to which radio is now used for communication between the studio and location units.

After completing this survey, during which information also will be assembled on the number of location trips to which companies have been sent by each of the studios during the past year, the committee will formulate plans for obtaining maximum benefit from the use of radio communication between the studios and units working on locations where there are no other means of communication available.

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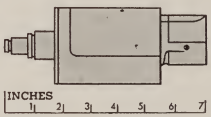

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The features of its predecessors have, of course, been retained in this new model . . . a self-setting film-footage indicator, accurately gear-driven for film economy . . . a jolt-proof, twin-wedge lens mounting permitting instant lens changes without unscrewing . . . and a spy-glass viewfinder, showing *only* the scene being photographed, with hinged masks for split-second matching with fields of extra lenses.

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COLUMBIA UNIVERSITY SPONSORING LITTLES' INTERNATIONAL SALON

THE INTERNATIONAL CINEMA SALON for 1938, or the First International Amateur Movie Show, as it may be called, is already an established fact. The program will be under the personal supervision of Duncan MacD. Little.

But behind this enterprise will be all the prestige and enormous influence of Columbia University, the Extension Service of which will take under its wing and its auspices not only the international project but Duncan Little's Ninth Annual Movie Party as well.

Film Study, new division of Columbia University Extension, will devote two of the twenty weekly cinema sessions to amateur motion pictures. These will be conducted in the McMillin Academic Theater. Both will be held some time during April of next year.

The first will be what heretofore has been known as the annual movie party of Mr. and Mrs. Little and the second the International.

"The Littles' party got completely out of hand this year," writes Dan Anderson in the Sun of New York May 22. "Its fame had spread until so many amateur cinema enthusiasts wished to attend that Mr. Little knew that it would no longer fit into his home and hired a hall. Even at that, an expected attendance of 250 turned into 335, to see a selection of representative amateur films.

Selection Plan to Remain

"He'd be needing Madison Square Garden in 1938, and it will relieve him of a burden and at the same time give the showing a fine sponsorship to have Columbia present it. The films will be selected by the same process that they have been lately, under Mr. Little's general supervision by a committee of qualified judges, probably again including Eileen Creelman, motion picture critic of The Sun.

"Mr. Little had expressed a hope that, perhaps by 1939, the party would take on the aspect of an international salon, but now Columbia will bring that into being a year earlier, and make it an event separate from the mainly American program.

"Probably ten nations will be represented by films chosen in competitions sponsored by amateur cinema organizations to select each country's best. The United States, Great Britain, France, Canada and Japan definitely will be among those showing; so much has already been arranged. There are plenty of other nations with central organizations of sufficient standing to select a representative film, and any difficulty will probably be in keeping the program down to a proper length.

"The plans were discussed at a gathering night before last in Mr. Little's home, those present including Dr. James C. Egbert, Director of Columbia Extension, and Dr. Russell Potter, associate director, under whose immediate supervision Film Study comes. The new division has other aspects not so directly affecting amateurs, but which will be of interest to them and to all persons who are cinema-minded."

Show for Holidays

In a letter to the editor of this magazine Doctor Potter inquires as to the view here of the possibility of there being general interest in a showing of amateur films some time before Christmas, to be in the same series and the program to be arranged by The Cinematographer.

"The two showings that are already planned will consist exclusively of 1937 films," suggests Doctor Potter. "The one which I am proposing to you would include films of slightly earlier vintage, prints of most of which I suspect are in your files."

To this magazine the suggestion "sounds good." Whatever may be done by this publication to further the project being conducted by Mr. and Mrs. Little and Columbia University we shall consider it an honor to do. It is true that in the not-quite archives of The Cinematographer are some excellent examples of earlier amateur films.

In a long wire from Mr. Little under date of May 12 the question was asked: "Privilege requested now best film your contest for inclusion International Exhibit stop Trust can be first screening in East."

The Cinematographer made prompt response. "By all means, Yes," was the word. "A request in return: May we state in advertising our contest that best American entrant in The Cinematographer's contest will by that publication, in behalf of and in the entire interest of that contestant, be entered in the International Salon as a contender for All American honors and if successful be a competitor in the grand final?"

No denial to this response has as yet been received from the East, and it is fair to assume it has been not unfavorably considered. Probably readers of The Cinematographer will be advised of the situation in the July issue.

Film Study has issued two announcements in folder form, with the particular days in April yet to be set, copies of which are as follows:

▼

DUNCAN LITTLE'S NINTH ANNUAL MOVIE PARTY

Wednesday, April——, 1938

As a part of its series, "Motion Picture Parade," Film Study will sponsor next year Duncan Little's Ninth Annual Movie Party. Screening will take place in McMillin Academic Theater on Wednesday evening, April ——.

The first Annual Movie Party was given by Mr. and Mrs. Duncan MacD. Little in the spring of 1929; there were twelve guests. At the last party, held in April of this year, there were 335—all of whom, it should be related, remained to the enthusiastic close of the evening.

"In the early days," writes Mr. Little, "few of the films were really good, but in 1937 only one was not excellent, at least in some respect; most were excellent in many respects."

Following the Eighth Annual Movie

Continued on Page 261

BUILD FASTEST SKY CAMERA TO SHOOT ECLIPSE

Professor Smiley of Brown University in Peru with F-1 Schmidt Lens-Mirror Camera Seeking Record Coronal Result

HIS GOAL a Peru mountain top, Prof. Charles H. Smiley, director of the Ladd Observatory at Brown University, has sailed for South America to photograph a total eclipse of the sun June 8, using what is believed to be the fastest astronomical camera ever built. He expects to record more of the sun's outer corona than has been possible before.

The camera has a lens speed of f:1 and a Schmidt lens-mirror system which had to be ground and polished to within one-millionth of an inch of perfection. Prof. Smiley and his assistants have taken more than a year to build the camera, after optical companies refused to undertake such a delicate problem.

To Peru with Camera

The eclipse, which will last longer than any other in more than 100 years, will begin its totality at sunrise north of the Fiji Islands and swing northward in an 8000-mile arc, 150 miles wide, across the equator to the tenth parallel.

Here the period of totality will be seven minutes and seven seconds. The path of darkness will then turn southward, crossing the equator west of the Galapagos Islands, ending in Peru at sunset.

With no convenient islands in the path of the eclipse, Prof. Smiley will select a vantage point on some coastal mountain in Peru. Accompanied by an Indian guide, he expects to explore the coastal range north of Chimbote to find a location above the coastal fog. This means that he will work from an altitude of at least 3,009 feet.

Conditions will not be ideal for photographing the eclipse, according to Prof. Smiley. The sun will be low on the horizon and light rays will be distorted by the atmosphere, although the period of totality will last about three and one-half minutes.

The fast camera, however, will make it possible for Prof. Smiley to use color filters and eliminate all but the more direct red rays of the sun. He expects to get a comparatively small photograph of the actual eclipse, with most of the negative exposed to catch the image of the long tongues of gaseous fire in the corona as they shoot out for millions of miles into space.

Unusual Factors

Prof. Smiley's assistants, Harry A. MacKnight, Donald S. Reed and Frederick W. Hoffman, completed the camera at Brown's Ladd Observatory. They then shipped it to Prof. Smiley's headquarters in Pasadena. Mr. MacKnight designed and built two machines to do the major part of the tooling; Mr. Reed was in charge of most of the fine optical work, and Mr. Hoffman has contributed mathematical calculations.

The Schmidt camera will record a field of 20 astronomical degrees, as compared with less than the one degree maximum scope of the reflector or ordinary type camera. Light rays are drawn through the four-inch lens to a spherical mirror, six inches in diameter, at the back of the camera. From the mirror the rays are recorded on one-inch film. The camera is to have a four-inch aperture and a four-inch focal length, with a focal ratio, or lens speed, of f:1.

One-Millionth Inch

The most delicate part of constructing the camera has been the grinding and polishing of the lens and mirror. Mr. MacKnight constructed special abrasive machinery to grind and polish the pyrex glass mirror and lens to within one one-thousandth of an inch of perfection. The final touches —polishing the lens with a fine powder—brought the lens to within one-millionth of an inch of perfection. Tests were made of the completely polished surface, using a wave length of light for detecting possible flaws.

By PROF. CHARLES H. SMILEY

Director of Ladd Observatory at Brown University

BROWN UNIVERSITY'S plans to observe the solar eclipse of June 8, 1937, were started in 1932, immediately after the total eclipse of August 31 of that year. Clouds had prevented the observation of that eclipse by the Brown astronomers at Sweden, Me. When and where would be the next total solar eclipse which they might hope to observe?

The eminent American astronomer Simon Newcomb had suggested back in 1879 that the total solar eclipses of 1937, 1955 and 1973 would be unusually fine ones. Professor Charles H. Smiley and Paul Eberhart set about computing the path of totality for this eclipse of June 8, 1937.

The computations indicated a duration of totality of slightly more than seven minutes, but Sarah Anne Island, the only island shown on maps in the region most favorable for observation, proved not to exist. The only land from which the eclipse can be observed as total proves to be a few small islands in the South Seas and the coastal region of northern Peru.

Of the islands in the South Seas, there were Mary, Christmas and Enderbury. Mary Island is sometimes called Canton Island. At Christmas Island, the sun will be higher in the sky at the time of the eclipse than at the other islands, which is a decided advantage, but the island is so near the southern edge of the path of totality that it will not be considered by observers. Totality will last a few seconds at the northern tip; the eclipse will not be seen as total on the southern part of the island.

Peru Best Spot

Best located for observation of the eclipse will be Enderbury Island, where the eclipse will be seen as total an hour and a half after sunrise. Totality will last about four minutes there, but the island is hardly more than a sand bar standing only a few feet above high tide. It will be difficult if not impossible to land the necessary scientific equipment on this island.

Mary Island (or Canton, if you choose) offers only slightly better facilities for landing equipment. There the sun will be about as high as at Enderbury Island, but duration will be only about three minutes and a half.

From a point in the coast range of Peru, between Chimbote and Huaraz, the total phase of the eclipse will

last about three minutes and a half, but totality occurs only about half an hour before sunset and the sun will be only about eight degrees above the horizon.

Charles (Cine) Coles Present

The plans of the group of American astronomers which will go under the leadership of Dr. S. A. Mitchell of the University of Virginia to observe the eclipse from Mary Island or Enderbury Island are already well known through the newspapers and will be presented again by numerous broadcasts over nation-wide networks.

To Peru will be going another group of American astronomers under the leadership of Dr. Clyde Fisher of the American Museum of Natural History. This party will occupy two observing sites in the Andes in northern Peru. Dr. Clyde Fisher, Miss Dorothy A. Bennett and Charles Coles of the American Museum of Natural History and Dana K. Bailey of the University of Arizona will observe the eclipse with photographic and photometric equipment from a point near Cerro de Pasca.

To a point between Chimbote and Huaraz will go Dr. J. A. Miller of Swarthmore College, Dr. S. A. Korff of Carnegie Institution and this writer. Dr. Miller and Dr. Korff will photograph the solar corona with long-focus cameras; the writer will use the short-focus f:1 Schmidt camera, the fastest camera ever to be used on an eclipse expedition, in an attmpt to photograph the outer parts of the solar corona.

Three weeks were spent in the study of photographic materials. The type of film, the color of the filter and the sort of developer to be used were important considerations. Besides rereading the standard authoritative books, I consulted experts on each of these subjects. There is probably no place in the world with a greater concentration of professional photographers than Southern California.

Host of Photographers

At Mt. Wilson Observatory are many of the world's leading astronomical photographers; eight of them are members of the National Academy of Science. And only a few miles away in Hollywood are many technical experts responsible for the splendid photographic quality of American motion pictures. In an industry using thousands of miles of film each year all kinds of photographic problems are met and solved.

Two kinds of photographs will be taken, one on green-sensitive film and the other on red-sensitive. The green-sensitive film was especially prepared by the Eastman Kodak Company's research department for use in our Schmidt camera. These film discs, one and one-half inches in diameter, will be used to photograph the outer atmosphere of the sun using only light emitted by the corona itself, most of which is in the green. (Wavelength about 5303 Angstroms, if one chooses to be technical.) These green-sensitive films arrived and one of the two dozen discs was used in a sensitometric test to determine their speed. It was very pleasing to find that the films not only are of very high speed but also possess a wide latitude, that is, are not so likely to be overexposed or underexposed. A number of these green-sensitive films are to be used in photographing the southern night skies.

8000 Miles for Four Shots

The other photographs will be taken on an extremely fast supersensitive panchromatic film, probably a hypersensitized to increase its sensitivity to the red end of the spectrum. This film will use both the light emitted and that reflected by the corona in an effort to record the outer corona.

Back in 1878 S. P. Langley observed a total solar eclipse and reported he was able to see coronal streamers of a length twelve times the diameter of the sun. No photograph has ever shown as much of the corona as man has seen, partly because of the shortness of the duration of totality and partly because of the slowness of the cameras used. We hope we may be able to record with our f:1 Schmidt camera, the fastest astronomical camera ever to go on an eclipse expedition, more of the corona than man will see.

To take at most four photographs of the eclipse, I shall travel eight thousand miles and be away from the United States seven weeks. Fortunately the prospects of clear skies are very good.

Assembling the world's fastest astronomical camera—Dr. Paul Eberhart and Frederick C. Hoffman installing the central unit of the Schmidt camera which Prof. Charles H. Smiley of Brown University took with him when he sailed for Peru to photograph the total eclipse of the sun on June 8. The top ring of the central unit will contain the camera's mirror; the middle ring, a special supersensitive film; and the lower dark ring, the camera's complicated lens, which is convex in the middle, concave around the edges, and polished to within one millionth of an inch of perfection. Machinery at the base of the camera will turn it in time with the sun. The lower end of the camera as shown here will be pointed toward the sun when Prof. Smiley takes his eclipse pictures.

CAMERA TOTING MEDICO BRINGS FILM A-PLENTY

Dr. Roy E. Gerstenkorn Home from Ten Months' World Tour Packing 10,000 Feet of 16mm

DR. ROY E. GERSTENKORN, Los Angeles physician, member of the Los Angeles Cinema Club, is home from a ten months' tour of the world. With him and most carefully guarded were more than ten thousand feet of exposed 16mm film. Recreation had been his primary motive. Making a photographic record of his trip had been secondary in importance—by that meaning that regardless of the weather he continued on his duly appointed way. If it rained he photographed what he saw that seemed to be of interest. He would not wait for the clouds to break. And sometimes he got something very much worth while not in spite of but because of the rain.

The doctor sailed west from the Pacific Coast, touching Japan, China, Ceylon, Equatorial and South Africa and South America. In China he traveled 1600 miles up the Yang-tse, through the land of floods and drouth, of devastation and starvation; ascended the stream where great junks actually are towed against the current by man power, by swimming men entirely naked tugging at ropes that serve as sole means of motivation.

It was through a country known to the outside world as that of bandits. Actually it was a country of hungry men and women and children. The doctor told of a vessel that was wrecked, with its back breaking as a consequence. Hungry peasants saved the lives of passengers and crew. They took the rescued ashore—and robbed them. Then they returned to the craft and stripped it of everything of any conceivable value. The British, French and American navies maintain patrol boats, but it is a long river.

Lioness leaves kill and strolls right up to car as it slowed to a stop. Lady one of the first of her breed Dr. Gerstenkorn encountered on trip. She was not exactly cordial. Photo enlarged from 16mm. Camera turned within less than ten feet of object.

Japanese Sequence Strong

Dr. Gerstenkorn up to the middle of May had cut but 1600 feet of the 10,000 he had exposed. These were 800 feet of Japanese and an equal amount of African equatorial country. There had not been time to satisfy his not unnatural curiosity to discover what the fates held for him in what so far is a sealed book.

The Japanese section is of high rank as an educational and a travelog. It is a study of the Japanese as a people, as a cross section of the life of a nation by one who seems to be an admirer of the race as he found it on its native heath—in the home and at work, as a tiller of the soil and as a craftsman and an artist.

The people plainly have welcomed the photographer, have gone out of their way to put themselves and their work and occasionaliy their play on the record. Not only do we see those who live in the crowded cities. We go along with the doctor out into the highways away from the crowd, to a Japan that is new to many Americans—a Japan where the women seem to feel entirely clothed when whatever garb adorns them is suspended entirely from the waist, and with naught above. Certainly it is a patient, an industrious and a cordial race.

Added to the Japanese chapter are

several sequences of life on the Chinese river boats. These are of unusual intimacy. The photographer has gone into the thick of the uncounted fleet, touched elbows with men and women who rarely or even may never have set foot on solid ground.

We see a native dip a big tin into the Yang-tse, polluted beyond the conception of a Westerner, and proceed to brew a pot of tea. It is the boiling, explains the physician, that makes life possible among the tens of thousands who live on these craft.

In Africa the doctor entered at Mombasa and traveled to Nairobi, to Tanganyika and Lorenzo Marques, south to Cape Town and back to Victoria Falls. While he had been in Northern Africa previously it was his introduction to Equatorial and South Africa.

The rainy season was well advanced, and the country correspondingly was in excellent condition. So, too, were the lions physically, as the photographer learned when he reached their country. There was a ready admission on his part that although he photographed at least thirty of the so-called king of beasts he experienced a continuing thrill when laying a camera on them.

Shooting in the Rain

In some instances the creatures were so near their bodies were close to the fenders or headlights—in one the great "dead pan" being ranged alongside the machine's headlight, as he was "shot" through an open windshield.

One of the more striking sequences was that of a group of giraffes photographed in a driving rainstorm during the equatorial afterglow that follows the setting of the sun. Behind the lighter colored grassy plain across which the animals were strolling was a heavy and strikingly dark, massive grove of trees. Behind that stretched a great plain lighter in color direct to the horizon. The sky carried a weirdly yellowish or near amber aspect for a black and white film. But it was a shot any photographer secretly or otherwise would experience a thrill in bringing home. And the rain was falling and the sun was down under.

It was on one of these early evenings when Dr. Gerstenkorn witnessed and also heard a fight between wild dogs and hyenas. The glow had faded too far to make possible a picture, even with the fastest film. But very vivid in the doctor's memory was the scream, terrified and pitifully appealing, that marked the fall of one hyena. In vocal quality it had a creeping resemblance to the cry of the human feminine in deathly terror. Its effect upon the feelings even mitigated the contempt which humans with all other animals unanimously share against the hyena. And incidentally the wild dog rates a close second to the hyena in the contempt world championship.

There was another shot the doctor muffed while in the Dark Continent. That was when a rhino charged a railroad train—and derailed the train and incidentally also rather marred the contour of his own somewhat uncordial physiognomy.

The doctor recalled an experience he encountered in an unforgotten river in Uganda. The white hunter and the crew knew there were rhinos under the surface, but yelling and shouting failed to bring a single head above water.

Come Up 'n' See Me

The boat was slid near the shore and a native jumped to the bank. There in the moist soil he gently patted a bare foot. As if in response to a straight telegram the heads of a dozen rhinos came inquiringly to the surface. There they remained for several moments and then submerged. That is, all did with one exception. One old bull remained slyly on watch.

One of the thrills the doctor brought home with him was the film record he made at two snake farms, one in Africa and the other in South America, institutions where poisonous snakes are bred and raised for the purpose of extracting and converting to medicinal use the venom of the bad boys.

These were at Port Elizabeth, Africa, and Sao Paulo, Brazil. At the former a demonstration was given by a native protected by gloves and puttees. At the other institution a white man is shown without gloves handling these naturally somewhat nervous children and demonstrating the method of extracting the virus. A hooded cobra will be rested on the broad brim of the operator's hat. The reptile will strike repeatedly at his fellows tangled in the hands of the demonstrator, but is unable to direct a blow at the face that is under the hat—which of course in a way helps to explain his presence on his particular perch.

The institutions are large and conduct an extensive business.

Doctor Gerstenkorn carried with him on his tour Eastman super and panchromatic film and Agfa and some Plenachrome. He tropically packed his own stock, medically taping each box in 100-foot packages. After taping he dipped each box in melted paraffine. He encountered no film trouble. At no time following exposure was it necessary to delay development more than six weeks.

One of the chief difficulties the doctor encountered in a photographic way was in the equatorial sector. There his light meter refused to function as it did in all the other many thousands of miles he traveled in the ten months.

Three grown-up and two baby hippos clamber up the bank of a stream a couple of hundred feet wide and emerge from genuine African jungle. The photographic light had so failed it was a question whether any discoverable result would be obtained. Taken from 16mm film.

FOR BEST RESULTS PLAN VACATIONS ON BUDGET BASIS

First Set Sum You Can Spend and Then if Possible Outline Kind of Pictures You'd Keep

THERE'S NOTHING particularly new about putting vacation moviemaking on a dollars-and-cents budget. Lots of us do that—some because we have to, others simply because we want to.

But did you ever think of putting vacation moviemaking on an idea budget? It pays!

What's the trouble with most vacation movies?

Nine times out of ten it is that the result on the screen fails to reproduce what the vacationer really wanted to capture in celluloid. Instead of showing the things he wanted to remember—the things that made the particular place he visited, or the particular thing he did, different from anything else—his camera all too often catches only ordinary things, people and events that might just as well have been filmed anywhere—if they should, indeed, have been filmed at all. In effect, he has set up a budget of film-footage for himself, and then squandered it recklessly on non-essentials.

The budget idea is fundamentally good, but if it is to work satisfactorily it should be extended to cover not alone the film used but the subjects upon which that film is exposed.

Every motion picture has, or should have, a story to tell; not necessarily a dramatic plot with heroes, villains and clinches, but something that can answer one or more of these simple questions: "Where?" "What?" "Who?" "How?" Every picture that is worth looking at must answer at least one of them.

Fortunately, too, every imaginable type of vacation can in itself be classified under one of those four headings.

Get Bearings First

The way, then, to start off on this business of budgeting your vacation-film ideas is to sit down and decide whether your vacation memories will be most concerned with the "Where?" of the vacation, the "What?", the "Who?" or the "How?" Once you know that you can immediately tell what your vacation camerawork ought to concentrate upon.

You will in all probability have determined already how much film you wish to shoot and whether you will use black-and-white or color. From past experience you will have a pretty fair idea of the allowances to be made for your own shortcomings—for NG'd scenes and the like.

So by now you know what should be the main interest of your vacation filming and how much film you can allow yourself to shoot. Since few pictures can confine themselves exclusively to answering one question, allow some footage for these supplementary answers. Then, if you force yourself to say no to every suggestion of filming anything that doesn't have its definite part in this scheme, your film must inevitably tell the story you want it to tell.

The biggest problem, of course, is in recognizing beforehand what kind of a vacation yours is going to be—whether it is a "Where" vacation, a "What," "Who" or "How." This isn't nearly as difficult as it seems, however, if you take the time to analyze your plans.

Just Plan Your Trip

Suppose you're one of those prosperous people who plan to vacation in Hawaii. Generally speaking, a trip like this is definitely a "Where" story. Outside of perhaps half-a-dozen shots made on the boat and (if possible) one or two of it, your real story needn't concern itself with any part of the boat trip beyond simply establishing the fact that you sailed from such-and-such a port on such a boat and got to Honolulu. Unless luck should bring you some unusually interesting shipmate like Mrs. Roosevelt or Greta Garbo, you needn't expend film on your fellow-travelers; they'll be forgotten as soon as you've crossed the gang-plank.

The same is true also of chance-met travelers in Hawaii. You'll probably never see them again; you probably won't remember them; they certainly won't be greatly different from the folks you'd meet at home or anywhere else—so why waste film on them?

Once in Hawaii your real story begins, and it is very definitely a "Where" story. You've used up perhaps twenty-five feet (16mm.) of your film supply establishing the fact that you traveled to the Islands. The remainder of your shooting should concern itself with the really characteristic things you see there.

Allow a minimum of footage for scenes that show Honolulu to be, in spite of its location, a thoroughly modern American city. Because it is such a city, it is in itself no more

Pass the Word Along

SOMETIMES when you are out on a hunt for worthwhile shots and things happen that in your experience are quite out of the ordinary, things that have interest for you and which you have no reason to believe would not interest others:

At your first opportunity write us about it.

If you have bumped into a snag which we may help to clear up we'll try to do just that. And if you unaided have surmounted something new to you in the way of difficulties so much the better for reader interest.

But pass the word along.

interesting for your purpose than Keokuk or Des Moines.

What you will really want to show the folks back home is the scenic beauty of Hawaii; the pineapple and sugar fields; Kilauea and the firepits; Waikiki and Diamond Head, and the really characteristic phases of Hawaiian native life. The Hula dancers and surfboard riders are just as much a part of the "Where" of your story as is Diamond Head—and where else in the territorial United States could you duplicate the shots of the fellow who so unctuously munches a wriggling, very animatedly uncooked fish?

Get the Novel

Keep your camera trained on these things, insofar as possible, avoiding showing modernities in the background or tourists in the foreground of your shots, and you will bring back the kind of a picture you want, within the footage you planned.

On the other hand, suppose you make the same trip by air, on the China Clipper. In this case your picture should have much more to say about the "How" of your trip. Fully half of the footage can well be devoted to telling how you made the trip. Go into detail about it.

If you can, arrange to be at the Alameda airport well ahead of time—if possible, spend a day or so there before you start. Get a shot of the inbound Clipper landing. Get shots of the field organization—the mechanics tuning up the motors—the radio operators at the station at their work—the pilots checking weather-maps—the baggage, the mail and express cargoes being weighed in and loaded.

Plan for Inter-Cut

Then show the passengers coming aboard, the hatches being closed, and the plane taking off. If you can manage to film another take-off, it will help, for you can inter-cut this scene with shots you make from your own ship on its take-off. Show San Francisco falling below and behind you—aside from its story value, it is one of the most beautiful cities in the world from the air.

Then get any shots en route that may seem interesting: passing over an ocean liner—interesting cloud formations — and shots inside the plane showing how your fellow passengers enjoyed the flight. Finally show the landing and, if you can, a long-shot of another Clipper landing, to be inter-cut as you did the take-off shots. From there on your story of Hawaii will be the same as though you had reached the Islands by boat.

If, on the other hand, the really important thing about your vacation is not so much where you went or how you went there, but what you did when you got there, your picture ought to confine itself largely to telling "What." Let's say you trek to the Rogue River country of Oregon to go fishing, or to the Rockies or Switzerland to climb mountains.

The important thing here is what you are doing rather than where you do it or who you are. So make your picture show visually the things and actions you would describe if someone asked you what you did. Your main supplementary phase would concern itself mainly with adding details showing how you caught salmon or how you climbed the Matterhorn.

Plant Identity of Locale

And when does the "Who" take the spotlight as the main interest of your vacation epic? Only when, in describing your vacation, you would naturally stress with whom you vacationed rather than where or how you did it. If, for instance, you had the good fortune to hobnob with the players in Hollywood, everyone would be interested in those you were with. They would be more interesting than any possible shots of Hollywood's scenery or your trip out on the latest streamliner.

To touch a more familiar picture possibility, suppose you take your camera on a fishing trip and plan to make your films not to entertain your friends and club members but simply as a personal record of the trip for yourself and those who fished with you. Here, again, though in a different way, your camera should keep itself largely to saying "Who" rather than "Where," "What" or "How."

Don't Bore Visitors

Make just enough non-personal scenes to show that you fished in the Rogue River rather than in Hudson Bay, and that you caught steelhead rather than catfish; but concentrate on the really characteristic actions of the members of your party. Finally—keep a film like this definitely for showings to the folks sure to be interested in it—your immediate circle of fellow-fishermen, their families and friends. For no matter how good you make such a personal record film it is not suitable as general entertainment.

Finally, if circumstancs (including fate and the wife) force you to lens "Who" shots during a "Where," "What" or "How" vacation, try to have the courage to cut them out of your final picture before they have a chance to bore outsiders who want to see Hawaii rather than Aunt Lizzie or the shipboard cut-up. This hard-boiled cutting may require diplomatic explaining, but it makes a better if shorter picture. Best of all, budget your ideas as you would your film, and you'll have nothing to explain or excuse!

Close-up of peon woman acting as human bellows for the fire under her tortillas is much more important to a vacation film of a trip to Mexico than shots of your fellow travelers.

NEWS OF THE MOVIE CLUBS

DR. SEASE OF DUPONT TALKS TO PHILADELPHIA CINE CLUB

PHILADELPHIA, May 14.—The May meeting of the Philadelphia Cinema Club was held in the Crystal Room of the Hotel Adelphia. Over forty members were present, and we had the pleasure of voting on two additional members, both of the female sex.

The principal speaker of the evening was the very well-known Dr. V. B. Sease, ASC, who is director of the Red Path Laboratory of the DuPont Company, of Parlan, N. J. While Dr. Sease's subject was listed as "Cine Emulsions," his field of coverage was quite broad.

Among the highlights from his speech was the fact that color photography had its inception back in 1861, when Clark Maxwell discovered that by using three filters of the primary red, green, and blue he could reproduce any color desired, using at that time what was known as the additive process. He called attention further to the fact that the faster the developer the more graininess, and that change from carbonate developers to borax developers slows up the action, but to a great extent makes a better film emulsion.

The speaker showed by lantern slides the action that takes place with the different types of silver bromide crystals, and that the modern formula has sulphate included in it to hold down the lumps of silver, and thus makes a better emulsion.

He also brought out that when using a slower developer it is well to open your lens one stop. Among the specialties mentioned were the use of an infra-red film to cut down the blue and take night scenes in broad daylight; the only objection being that it turns foliage white. He also pointed out that the modern technicolor process is practically similar to a lithographic action, in the fact that the colors are applied to the film in practically the same manner.

A rising vote of thanks was extended to Dr. Sease for his very fine lecture and answering of questions at the open meeting.

Eugene Lutz of the Philadelphia Cinema Club exhibited his color film entitled, "Dora Lutz and Her Easter Flowers." This had been taken with the Eastman Special, and exhibited to a great extent the versatility of that machine.

One of our new members, H. Nelson Lewis, exhibited his film entitled "The S. S. Wood Minstrel Show." This was an 8mm film in black and white, taken indoors, and was Mr. Lewis's first effort. He used to a great extent an ordinary wall-clock to note the passage of time in the film.

Arthur J. Hurth, one of our charter members, exhibited an 8mm film in color, taken during the past year, and showed what good results can be secured by a proper understanding of the machine and the subject.

J. C. Stuessi of 2107 Irving Parkway, Chicago, Ill., had requested members of the Philadelphia Cinema Club to take pictures for him of various scenes in and around Philadelphia of historical importance, sending the Club several hundred feet of film, in order that the pictures could be taken. These films have been completed, and were run off at the meeting, before being sent to Chicago.

The Cinema Club of the Oranges of Orange, N. J., issued an invitation to the Philadelphia Cinema Club to attend their Ladies Night in Montclair, N. J.

The invitation came by way of Dr. Bowersox, one of our members. Dr. Bowersox also exhibited a film taken at the Underwood Hospital, indicating medical operations performed before the camera, and with the use of only the regulation lighting that is employed in an operating room.

Dr. Gerstenkorn of L. A. Cinema Club leans over African gunboy as latter removes horns from animal killed for the Commissary

The various films shown were well received by the members, the meeting breaking up at about 11:30 P.M.

B. N. LEVENE,
Chairman of Publications Committee.

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CHICAGO CINEMA CLUB

The Chicago Cinema Club is the oldest incorporated amateur movie club in the United States. May 21 was the tenth anniversary of its first meeting, which was held in the Charles Harrison Early American Room.

May 6, the club held its business meeting and a film analysis, the latter conducted by Charlie Wyman. It was announced the next analysis would be June 3 and that to insure a subject's screening on that date it would be necessary to register it before.

May 13 was Victor Animatograph night. Don Oliver was in charge of the program. The feature was the screening of Dr. Albrecht's "Wild Life of the West and Northwest." The doctor is chief taxidermist of Field Museum.

May 20 the club conducted one of its popular features—an auction of "cinematic articles," etc. The auctioneer handles two kinds of "articles," these being such as may be given to the club and those which are to be sold for the individual, the club retaining 10 percent of the returns. Usually there is entertainment as well as profit in the proceedings.

The feature of the evening, however, was the illustrated lecture by H. K. Shigeta on "Composition in Cinematography." The lecturer is one of the country's successful photographers and is connected with the Shigeta-Wright studio.

At the last business meeting of the club, James P. Fitzwater was elected president to succeed Mr. Shelter resigned. Sherman Arpp was chosen vice president. Peter S. Bezek continues as secretary. The editor of News Flashes, the club's newspaper, is S. F. Warner.

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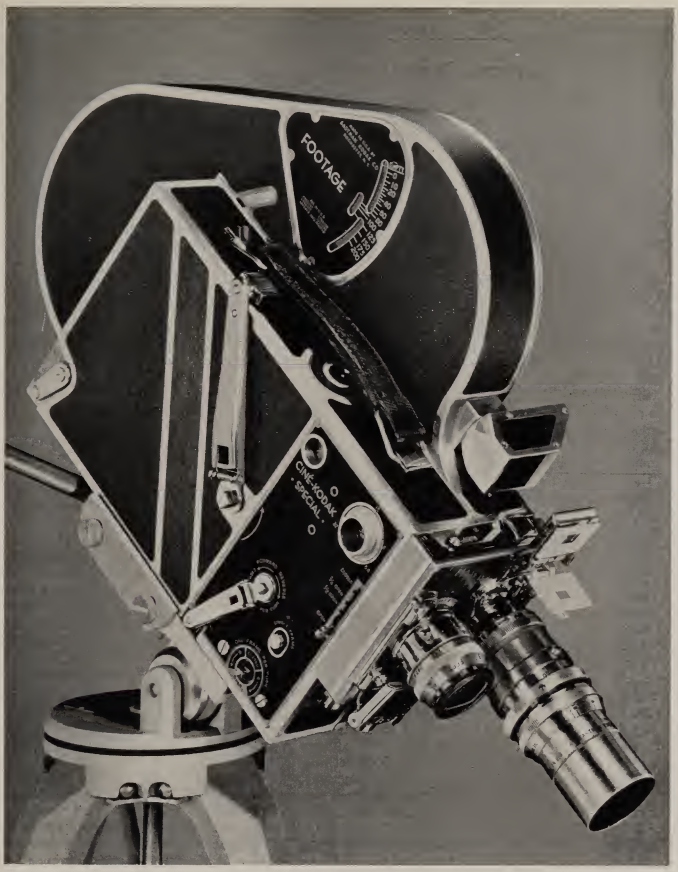
METROPOLITAN, NEW YORK

The May bulletin of the Metropolitan Motion Picture Club of New York is one of the more interesting examples of these publications of the amateur cinematographers. Most of these journals—in fact, it may be said all that so far have come to the editor's desk—are works of love, a manifes-

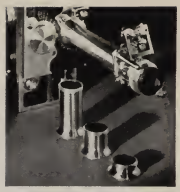


Eastman's Finest 16 mm. Movie Camera

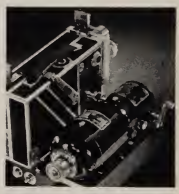
CINÉ-KODAK SPECIAL

FROM the standpoints of ability and performance, the Special is unquestionably the most remarkable 16 mm. camera ever produced.

The basic model of Ciné-Kodak Special offers unique and exclusive refinements such as adjustable opening shutter, camera speeds from 8 to 64 frames per second, a reflex finder permitting ground glass focusing, interchangeable 100- and 200-foot film chambers, one- and eight-frame hand cranks for forward or reverse film winding, single frame release, individual foot meter, single frame counter, double lens turret, mask slot between lens and film. Fades, dissolves, double and multiple exposures, mask shots, slow motion analysis, animation—all these advanced effects are easy with this basic model. Wide though its range, even greater versatility is made possible by eight interchangeable lenses, ranging from wide angle to 6-inch telephoto, and accessories such as those shown at the right. A free booklet tells the complete story. Eastman Kodak Company, Rochester, N. Y.



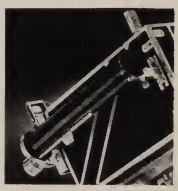
With the Lens Extension Tube Outfit lens fields may be narrowed to .047 of an inch in width.



The Electric Motor Drives permit automatic or remote control for the making of many advanced effects.

The Electric Release Control Outfit permits intermittent exposures by electrical or remote control.

The Reflex Finder Image Magnifier reproduces an enlarged Reflex Finder image.



The Optical Finder corrects parallax, shows the field, at all distances, of all focal length lenses.

tation of the enthusiasm that seems to be a part of the make-up of the amateur cine follower.

Robert M. Coles is the secretary of the Metropolitan and Edith J. Schroeder is the editor. The bulletin is of one 8½ by 11 inch sheet printed on both sides. The title "Close-Up" is printed at the top of a reverse plate 1⅛ by 2 inches. Across the center is silhoutted in white the skyline of Little Old N. Y. In prolongation on each side is a roll of film. Across the bottom are the initials M. P. P. C.

The first department is under the caption of "Hear Ye! Hear Ye!" At the left of the caption is a cut of a bell in hand. (Just on the quiet, it looks suspiciously like a picture of the ancient bronze symbol that in other years anyway rested over the door of the Bell in Hand Tavern in Pie Alley, just at the foot of the stairs that mounted to the composing room of the Boston Herald. The accompanying inscription, if memory serve, was "1797." But surely that is not a part of this story.)

The introductory paragraph referred to the growing attendance, followed by the program of screenings for May 13. The contributors were John J. Klaber, Miss Alice Wright, James H. Anderson, Dr. Nelson W. Lockwood and Edwin T. Schwarz. The topic of the Round Table discussion, under the leadership of Mr. Carbonaro, was "How and When to Use Filters." Under this is a run-around cut of a chef. To his right is the word "Announcing" in script followed in the text typewriter by the address of the dinner meeting.

In fact, run-around cuts are a feature of the make-up of Close-Up. They are planted with that regard for composition which should guide the editor as well as the photographer. And there are eleven of these.

The M. M. P. C. has its 16mm group and its 8mm group. Among the subjects shown were those by Miss Burt and Mr. Maitland, in both of which titles and films have been developed by themselves Of peculiar interest perhaps to many who may be unacquainted with members of the club is the announcement that Mr. Hollywood showed the club's first slow-motion 8mm picture.

The second page was devoted to "Discussions and Screenings at April Meeting." We regret lack of space forbids our going into these in detail, for in the text there is much that will attract the amateur solely for its general interest.

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LOS ANGELES 8MM CLUB

The regular meeting of the Los Angeles Eight Millimeter Club was held in the Auditorium of Eastman Kodak Company, May 11.

Five new members were announced by Vice President John E. Walter. Robert W. Teorey, William K. Rand, Jack Scull, Victor I. Becker, and Dr. Marshall A. Carter were the new members listed.

No. 2 of the official publication of the Club, Thru the Filter, was passed among the members.

President Loscher asked for an expression of the showing of "The Covered Wagon" at our next regular meeting, and the members were in favor of having this popular production shown. We were reminded that an admission charge of 10 cents would be made to defray the cost of the rental of the film.

The technical committee was given more time to devote to its usual period and the members came well prepared to ask many interesting questions.

R. E. Merville, who is an occasional visitor to our club and who always comes prepared to show us something "new" in the line of 8mm equipment, demonstrated a new Siemens 8mm Camera he had just purchased. His demonstration proved to be very interesting as well as educational.

We were most happy to welcome former President Dr. Henry Linek back to the club. He has been ill for several months.

C. G. Cornell was called upon to give us a report on "News Items" and reminded us of a very interesting article in the American Cinematographer Magazine on "Titles and how they are made," by Robert W. Teorey, one of our club members.

Al Leitch of the social committee conducted a short discussion on the possibilities of the club having a picnic on a Sunday in the near future. It was suggested July would be appropriate and it was decided to have an open discussion regarding such a picnic at the next meeting.

Mr. Cadarette, chairman of the by-laws committee, reported progress of the committee in the drawing of by-laws, and we were promised by next meeting they would be ready.

We were fortunate in having a unique demonstration of making our own sound records by M. S. Selvage of the Radiotone Equipment Company. The microphone was passed around to several members and expressions on how they enjoyed the club were recorded. The reproduction was perfect. Next a film by one of the club members and secretary was projected and remarks made. The film then was reprojected and the recording played back.

M. R. ARMSTRONG, Secretary.

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Famous Last Words

OVERHEARD at a home showing of amateur films:

"Annie, don't be a simp! Don't let Frank buy that camera he's talking about. If you do there'll be no more new dresses, no more— And when it comes to a fur coat—mmm, well, you take it from me. Don't!"

How the Teoreys Shot 'The Golf Widow' Cast

THE FOUR-PAGE May bulletin of the Los Angeles 8mm Club, which is edited by the club's secretary, M. R. Armstrong, assisted by E. J. Brouillette, Jr., contains a few lines from Bessie May Teorey descriptive of the execution of the scrapbook idea for introducing a cast. The writer is the wife of Sergt. Teorey, whose talent for inventing gadgets for use by amateurs was uncovered at length in the two preceding issues of this magazine.

The Teoreys recently produced "The Golf Widow," which was shown at a recent meeting of the club. Mrs. Teorey is as enthusiastic and as talented an amateur as is her husband, who in his capacity as sergeant of marines now is somewhere in the Pacific near Honolulu. But let Mrs. Teorey tell her own story:

The Low Down

"For sometime I had wanted to introduce a film story with a scrapbook idea, the pages turning to introduce the cast, so when we were ready to shoot our quickie, 'The Golf Widow,' I bought an ordinary scrapbook that had a dark green burlap cover, having in mind using white letters on it for a contrast and black lettering on the white filler pages.

"Mr. Teorey did all of the necessary hand printing in two days. The results he obtained were far beyond my expectations, so of course I was more enthusiastic than ever. He fastened fine black threads to the upper corners of the pages, tying a white button on the end of the threads and laying them out in order beyond camera range. We had obtained a remnant of drape damask which I crushed around the book.

"This gave the picture depth and made for excellent highlighting. As I turned the pages slowly, he read the titles through one and a half times.

"Many things were learned during the filming of this story; one is—keep the action of players smooth and unhurried in all scenes!"

New Eastman Sound Projector Demonstrated at Convention

One of the surprises of the Spring convention of the Society of Motion Picture Engineers was the demonstration of the new 16mm Sound Kodascope Special by E. C. Fritts and O. Sandvik of the Kodak Research Laboratories. Designed apparently as a companion to the Cine Kodak Special, the new projector is a de luxe silent or sound projector of marked simplicity of operation.

The machine is housed in a silver-finished case of modernistic design. For operation, the forward section of this opens and the feed and take-up spindles unfold into place; the former directly above the mechanism, the latter below and at right angles to the aperture. The sound amplifier and loudspeakers form a separate unit, drawing power from a separate plug. The latter also powers the sound pre-amplifier in the projector unit.

In use, the film is threaded roughly through the mechanism, and a small lever is depressed which automatically forms the correct loops. The aperture is curved to minimize buckling, and the f:1.6 lens compensates for the necessarily curved field. The entire film-moving mechanism works in an oil bath to minimize wear and to assure silence. The sound-reproducing drum is damped by a suitable flywheel, and is elastically connected to the film movement through a fluid drive.

The movement is non-reversible, and provides two speeds: 16 frames per second, for silent projection, and 24 frames for sound. The driving motor and the projecting lamp are controlled through the same switch so that the lamp cannot endanger the film when not running. A 750 watt lamp was used in the demonstration, but it was stated that other sizes would be available.

To rewind film, the upper reel spindle is turned parallel to the lower one, and the rewinding effected by a separate motor. Either 400-foot or 1600-foot reels are accommodated.

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COLUMBIA SPONSORS THE LITTLES' PLANS

Continued from Page 251

Party, George Blaisdell, editor of the American Cinematographer, wrote Mr. Little: "I assure you of my belief that in your work you are doing something really worthwhile in a large way."

Selection of films for exhibition at the Ninth Party will be left to a responsible jury, as in the past. All program announcements will be under the personal direction of Mr. Little. There will be no prizes and no awards of any kind. Film Study will furnish a leader for each film selected for showing, to read "Selected for Exhibition at Duncan Little's Ninth Annual Movie Party, under the auspices of Film Study of Columbia University, April——, 1928."

All amateurs are cordially invited to submit films. There are no fees or dues. Further details may be had by writing Mr. Duncan Little, 33 West Sixty-Seventh street, New York, or to Film Study, Columbia University Extension, New York.

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INTERNATIONAL AMATEUR MOVIE SHOW

Wednesday, April——, 1938

Film Study, a division of Columbia University Extension, announces with great pleasure its first International Amateur Movie show, to be given at the University Wednesday evening, April——, 1938, in McMillin Academic Theater.

The program will be under the personal supervision of Mr. Duncan MacD. Little, member of the Amateur Cinematographers, of England, the Society of Amateur Cinematographers of Hollywood, and the Metropolitan Motion Picture Club, of New York.

Mr. Little is himself an amateur motion picture photographer of distinction. His film, "The Making of Canadian Homespun," has won honorable mention in England, in Canada, and in the United States. Two other films by Mr. Little were cited for honorable mention by the American Society of Cinematographers—"The Circus Is In Town" and "The St. Maurice River Canoe Race."

At this first International Amateur Movie Show films of outstanding merit and unusual interest will be screened. They will be selected from the prize winners in England, Scotland, Czechoslovakia, Austria, Australia, Holland, France, and the United States and Canada.

No prizes will be given, but Film Study will award a Certificate of Merit to each film selected for screening and a leader to read "Selected for Exhibition at the First International Amateur Movie Show, Columbia University, April——, 1938."

There are no fees or dues for entry.

Amateurs the world around are cordially invited to submit films through their local or national groups. Further details may be had by writing to Duncan MacD. Little, 33 West Sixty-Seventh Street, New York, U.S.A., or to Film Study, University Extension, Columbia University, New York.

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EMBASSY IN 16MM SOUND

Embassy Talking Picture Productions, with offices in the Basso Building, Detroit, recently has equipped a studio for the reproduction of direct on 16mm sound pictures. The company is prepared to shoot sound and pictures in its studio or on location. It also is equipped to record sound either single or double system and for the dubbing of sound, voice and effects to silent 16mm film.

Industrial, advertising, promotion and personal sound motion pictures will be made to conform to client's order.

▼

TWO KODACHROMES LOWER

Eastman Kodak Company announces a reduction in the price of Kodachrome film for miniature cameras. Kodachrome No. K135 and No. K135A, for photoflood lighting, both eighteen exposures, for Kodak Retina and similar 35mm. miniature cameras, is reduced from $3.50 to $2.50, including processing.

Kodachrome Film No. K828 and K828A for photoflood lighting, both eight exposures, for Kodak Bantam Special, is reduced from $1.75 to $1.35, including processing.

▼

CASTLE FILMS GROWS

To meet the demand of expanding business, Castle Films, Inc., is moving to new offices in the R. C. A. Building, Rockefeller Center, which has been its New York address for the past four years. Its new projection room, one of the largest in the business film field, will be at the disposal of organizations which lack such facilities.

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CHILEAN EXHIBITION NOTES

According to figures just obtained from the Censorship Board, and submitted to the bureau by Assistant Trade Commissioner Minedee McLean, at Santiago, during the thirteen months from January, 1936, to February, 1937, that board reviewed a total of 533 features, 77.3 percent of which were imported from the United States, and a total of 703 shorts, etc.

16mm SOUND DISPLACING 35mm IN BUSINESS WAY

Abridged from a Paper Presented at the Spring Convention of the Society of Motion Picture Engineers, Held In Hollywood, May 24, 1937

By A. SHAPIRO
Ampro Corporation

THE 16MM. SOUND picture is today definitely recognized as an important factor in industrial publicity and advertising. The schools have accepted it as a valuable contribution for aiding in educational processes. There is a growing use of 16mm. sound as an entertainment medium.

Present-day 16mm. sound is markedly better than what was available two years ago. The prints have a wider range of frequency response. Equipment will reproduce this wider range with negligible distortion, and with volume ample for even large auditoriums. The screen illumination has been advanced proportionately.

For commercial and industrial purposes 16mm. sound has almost entirely displaced 35mm. The pictures and sound are recorded in the usual manner on 35mm. film and then optically reduced to 16mm. film, making it possible to show the picture easily, at any time or place. One large automobile manufacturer is said to have over 500 16mm. sound projectors constantly in the field, while a single operator, showing a 16mm. sound film for the Chicago Surface Lines, showed it to nearly 100,000 persons during 1936.

It is in the educational field that the most interesting developments in the 16mm. sound field have taken place. The 16mm. silent film had already gained an important place in this field, and there were large libraries of educational 16mm. silent pictures, covering almost every subject taught in our schools and high schools. In addition, courses for teachers are being given in visual education, including both the operation of the projector and the methods of correlating the picture with other instruction.

Education First

Only a small fraction of the subjects taught in our schools have been reinforced with the talking picture. Here seems a field where the pedagogue and the film producer can unite very effectively. Subject presentation is definitely a pedagogical problem, while direction and production technique can best be handled by the present staffs of the producers.

In the past it has not been understood sufficiently that the primary principle of the educational picture must be to educate, and past educational films have had much more entertainment than educational value. The necessary art of the film producer must be secondary to the primary educational intent.

In the entertainment field, though 16mm. sound is of adequate quality for the smaller theatres, there has not been as much achieved in this direction as might be expected. In England and many other European countries there are a number of small theatres which operate regularly with 16mm. equipment.

Gaumont-British furnish its current productions on both 35mm. and 16mm. film, and the small theatre using 16mm. equipment can show the same pictures as the larger theatre using 35mm., but with a saving in costs. In some cases this saving has a direct bearing as to whether or not the theatre can operate at a profit.

The principal reason for the non-use of 16mm. equipment in theatres in this country is the fact that American producers as a whole are opposed to issuing their pictures on 16mm. The entertainment 16mm. library here is restricted largely to independent pictures and those made by a few major producers as long as five or six years ago.

Since the latter were produced by what is now inferior recording equipment the reduction prints often show very poor sound quality.

Government Using 16mm

There are, however, a number of operators, usually road men, using 16mm. sound for paid entertainment. Adding to their demand for more and better films is the increasing use of 16mm. equipment by departments of the United States Government, including CCC camps, the Army, Navy, etc.

Here it appears that Hollywood producers have an opportunity to find additional outlets for their productions. To meet the objection that such programs would interfere with revenue, it is suggested that these 16mm. prints be released perhaps ninety days after their initial 35mm. release, so that their regular 35mm. theatrical income would not be jeopardized by and the income from 16mm. use would be added revenue.

ardized and the income from 16mm. sound film is finding increasing use as a medium of propaganda. In the political campaigns of 1936 in Sweden both of the two foremost parties made extensive use of 16mm. sound film propaganda. Both expressed themselves as highly satisfied with the interest aroused by 16mm. sound-film presentation, though only one was satisfied with the results of the election.

With regard to the home field it appears that the home 16mm. owner is not ready to purchase 16mm. sound equipment in any quantities. One reason for this is probably that so far there is no 16mm. sound camera available which can give adequate results and yet be simple enough for amateur use.

The amateur cinematographer would very much like to make his own sound pictures, but there is no practical means of his doing so, while libraries of 16mm. entertainment films are, as has been said, very limited. The possibilities of this field are definitely tied to the development of a suitable amateur camera and more extensive libraries of entertainment film.

▼

UNIVERSAL CAMERA IN WESTERN OFFICE

HARRY C. LEAVITT, formerly head of the Leavitt Picture Company with its place of business in Wilshire Boulevard, has been appointed western representative of the Universal Camera Corporation, with offices at 6058 Sunset Boulevard. The Universal manufactures and distributes the Univex 8mm camera and projector.

Service Station No. 1 was opened in Hollywood May 17. The sales office at the number indicated will be wholesale only. The western allotment of equipment was in March set for the year 1937, but in two months it was exhausted. That particular incident was chiefly responsible for the sudden visit to Los Angeles on the part of Vice President J. J. Shapiro and Sales Manager Frank G. Klock. The two executives were interested in learning just what had happened to precipitate the outgo. They learned and a new allotment was provided.

The home offices of the Universal Camera Corporation are in Manhattan, where at 32 West Twenty-third street they were established late in 1933. During the company's operation millions of still cameras have been sold at prices of 39 cents to $1, $1.50 and $2.59.

A company executive is quoted as remarking Universal plans to market a quarter million of the $9.95 movie cameras and $14.95 projectors during 1937.

COMPOSITION NOT SO TOUGH AS IS OFTEN CLAIMED

Comprehension of Underlying Principles Is Not Restricted to Those Miraculously Endowed---Fundamentals Are Quite Simple, 'Just Making Pictures Easy to Look At'

COMPOSITION, as it concerns amateur filming, is beyond doubt the most maligned aspect of moviemaking. Not that even a majority of the really serious cinefilmers make bad compositions, but all of them save those few who have learned better from past experience in still photography, painting or sketching seem consciously or sub-consciously afraid of the term.

The blame for this rightfully should be laid at the door of those overearnest artists, photographic and otherwise, who in their zeal to analyze and tabulate the how, why and wherefore of achieving good composition have managed to screen the essential simplicity of the matter with a maze of words and mathematics that would bewilder an Einstein.

Just Pleases the Eye

Composition is fundamentally simple. Webster defines it as "The practice of so combining the parts of a work of art as to produce a harmonious whole." Personally, I think that Edward Steichen's definition is even better for the camera-minded artist. Said Steichen:

"Composition is simply making pictures that are easy to look at."

Really, that's all there is to it. If your pictures aren't easy to look at, all the attention in the world paid to high-sounding phrases and intricate geometry can't make them good compositions. If they are easy to look at you can evolve all the fine theories you like about the geometry of the composition—but the composition will still be good primarily because it is pleasing to the eye.

The surprising thing about composition is that we simply can't help making compositions, good or bad. If I take a blank sheet of paper and make the tiniest dot on it with pen, pencil or anything else, the result will be composition. If I take a box brownie and snap it through the window I'm making a composition. If I happen to use a finer still camera or a movie camera, I'm still making composition every time I expose a frame of film.

Composition Inevitable

Since composition is such an inevitable part of photography, we might just as well make our compositions good. Fortunately it's no harder to do so; in fact, often it is easier.

I like to think of composition as a matter of leading the eye to whatever I want it to see and then holding it there. Every scene has some point of principal interest: that should be the most important part of the composition. Everything else in the scene should serve either to lead the viewer's eye to that point or, once it is there, to keep it from straying.

A series of tests made several years ago by Daniel B. Clark, A.S.C., proved that in the majority of cases the eye of a person looking at a moving picture screen begins to see the picture at the lower left-hand corner of the screen, and travels diagonally upward toward the upper right-hand corner. unless something in the picture diverts that travel.

Guideposts in the Picture

It is not always practical, of course. to arrange things so your most important object is in such a position. But you can very easily place guideposts along the way that will direct the audience's eyes to whatever other point you desire.

None of these little guides was either large or obvious. Looking at the picture, one was not conscious of them, or of how they led the eye; but they did the work. Only a small branch here, a splotch of sunlight there, and a spot of shadow somewhere else—far too small to be noticed consciously, nevertheless they carried your attention all around the picture in a fraction of a moment, and brought it to what the photographer wanted you to see.

On the other hand, let any of these little signals be too evident, either in size or contrast, and it will stop the eye just as effectively.

One often hears the term "balance" in discussions of composition. Don't, for heaven's sake, make the mistake of thinking it means that both sides of the picture should be symmetrical. That is, of course, possible, but the result is stiff and formal, like a formal oration. And in most home movie filming we want to maintain an air of informality.

Maintain Balance

Balance simply means that if you have some strongly noticeable feature on one side of your picture, there should be something on the other side to counterbalance it. If, for instance, you have some large object on the left of your picture, you ought to have something fairly noticeable on the other side to keep the picture from being lopsided. It may be something large, or it may be merely a contrast of light and shade. It may be a large mass on one side, offset by form or line on the other.

The same applies to the relation of the upper and lower parts of the picture as well. That is one reason why, in filming landscapes, it is so much more effective if you can have some sort of a "frame" across the top instead of plain blank sky. This "frame" can be almost anything—a sprig of branches, a tree limb, an arch, or whatever is convenient. Several professional cinematographers of my acquaintance always carry a short tree branch with them whenever they go on location—simply for framing purposes.

For this same reason, when you are making scenic longshots you will find it every bit as important to "frame" your longshot with an effective foreground as to choose an interesting background. A well chosen foreground frames your real view and concentrates attention on it, rather than letting the eye wander aimlessly off the edges of the screen or hunt for something definite to look at.

This Matter of Tone

In an extreme longshot like this you will encounter a definite exposure problem. If you expose correctly for the foreground, the distance—the part of the scene you're really interested in getting—is likely to be overexposed. If you expose correctly for the distance your framing foreground is likely to be a little underexposed or even semi-silhouetted. This will give you some idea of the importance of the tone of an object or area in composition. In the first case, attention is almost invariably concentrated on the foreground due to its light tone

and to the fact that the overexposed distance is vague and meaningless. In the latter instance, the darker tone of the foreground frame serves to keep the eye from wandering, while the contrasted, relatively lighter tone of the distance rivets the attention where it should be.

Horizons and Such

Whether you are looking at a landscape scene before you photograph it or on the screen, you will notice that the horizon line divides the picture into two parts. According to the way you set your camera in relation to the scene you can place this dividing line anywhere you wish. The safest rule to follow is never to place this division right at the middle of the picture. Placed centrally it too obviously cuts the picture in halves and gives a stiff, monotonous effect. Generally speaking, the most pleasing composition in landscapes is had if the horizon is about two thirds of the way up from the bottom; at any rate, well up into the top half of the frame.

Another very similar and very large "Don't" is, never let any object in your picture cut the picture into two exact halves vertically. A tree which, placed a bit to one side or the other of the up-and-down central division may be very effective, positively will kill your composition if you let it appear in the exact center. The eye simply can't get past that tree!

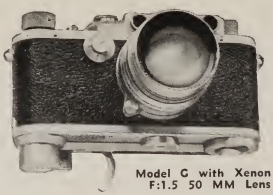
Alphabetical Composition

If you read what the photographic and artistic experts write so profusely about composition you will undoubtedly have been dazed by arguments over "S-curves," diagonal, triangular, and other alphabetical and geometrical complications. For practical purposes, there is no need to worry about them; they are simply terms that try to analyze arrangements of lines that lead the eye, or placements of principal objects, in ways that make a pleasing picture. And if you forget all these complexities and remember only to make pictures that are pleasing because of light and shade, line and form, rather than for color contrasts you can't reproduce in black-and-white, your compositions will be good—and easily attained.

Whatever you do, don't try to include too much in your picture. All too frequently the unwary will try to combine two or even three inherently good compositions in a single shot, with the result he gets only one badly mixed composition. Before you expose any scene, try asking yourself if there is anything that can be eliminated from your picture. If there is, do it. If there isn't, you've probably got a good, pleasing composition.

Finally, don't forget that moving the camera a few feet to one side or the other, or a bit up or down, will give you an entirely new viewpoint and make a new composition for your picture. Often such a move will make a pleasing picture out of an indifferent view.

W. S.



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▼

IT WAS LABOR OF LOVE

Cinema Club Member and School Principal Doing Worthy Work

AT THE HOME of Dr. Freebairn of the Los Angeles Cinema Club during the past month this reporter was shown a series of 16mm subjects that had been photographed in the Canfield Avenue School. The doctor was assisted by Mrs. Freebairn and Miss G. Elizabeth Johnston, principal of the school.

With film purchased by the three named, with scant equipment and without lights, pictures were taken in all of the fifteen rooms recording the more notable of the school's recreational-educational activities. Particular attention was paid to those phases of school work in which the children think they are playing a game but in which the teachers only too well know they are being taught fundamental things in an educational way.

As an example, in one room the pupils were experimenting with magnets of various sizes. In another, with crayons and large sheets of paper and clay the children were creating in pantomime and background "The Story of the Nile." In clay a pyramid had been built. Near it was a representation of the Sphinx.

In another room the children, with home-made costumes, were staging a theatre project. It is all very interesting, to the adult as well as to the children. For in each instance the children who were photographed afterward were given opportunity to see themselves on the screen.

"The plan of showing the children in the midst of their school activities has resulted in a very definite success," said the doctor. "The social stimulus value is incalculable. There is nothing new in the principle that play properly guided has the greatest possible educational force.

"It gets the children away from any handicapping inferiority complex when they see themselves in the pictures and have an opportunity to observe what is accomplished by others more fortunately endowed. It inspires them to match their fellows. It gives the children a chance and, what is of large importance, it raises the teacher's standard of teaching.

ADVANCED CINEAMATEURS HAIL DUPONT'S NEW 16mm

THE ANNOUNCEMENT by the DuPont Film Manufacturing Corporation that its sales plan for the New Type 300 DuPont Superior 16mm Panchromatic would provide for inclusion of processing charge and positive print cost in the purchase price of the film aroused real interest among amateur cinematographers. Especially concerned were the more advanced of the clan, who for themselves count completely lost that day in which is registered no progression toward the status of the qualified cameraman.

Among these more advanced followers of the camera are many men of means and some leisure. These who within reason reckon not the cost openly welcome the innovation. Behind them come the legion of experienced amateurs of moderate means who foresee occasions when they will be glad to have more than one print and to preserve the negative.

The company announces that for the present film will be returned to DuPont for processing in special fine grain developers which keep the graininess down to a satisfactory level.

Among the qualities enumerated for the Type 300 Panchromatic it is stated that in speed, latitude, grain and color balance it is identical with the 35mm Superior Panchromatic in use in Hollywood.

Advantages of Speed

The new stock differs from ordinary 16mm film in that it has a protective layer between the active emulsion and the celluloid which prevents halation and, more important, insulates the active layer from any harmful action from the celluloid solvents which can cause loss of sensitivity or degradation of the latent image.

Citing the advantages flowing from the extreme speed of the new film it is pointed out it is possible to work under adverse lighting conditions, both interior and exterior; it facilitates slow motion photography, and allows fully timed negatives to be obtained behind the dark red filters if extreme corrections are desired.

The color balance is so chosen as to give optimum results with and without make-up. Subjects shot under incandescent light without make-up will be found to have a pleasing, clear flesh texture without sacrifice in modeling or excessive lightening of lips.

In the matter of latitude the contrast of the new film is set at a level which gives the greatest range. Subject material with deep shadows and bright highlights will be reproduced without the shadow detail blocked or the highlights chalked up through loss of detail.

The quality and cleanliness of the prints will reflect the high operating standards which are so vital in the manufacturing of motion picture products.

What New Film Brings

As to the advantage of negative and print method over the reversal process the following are cited:

(a) Provides opportunity in printing to correct for minor errors in original exposure of negative.

(b) Greater exposure latitude. The negative-positive system will handle a much greater departure from correct exposure than the reversal system. With the latter, gross overexposure leaves insufficient silver halide to produce a satisfactory positive. In the negative and print method the positive has its full quota of emulsion, and all that is necessary is to provide sufficient printing light to get through the negative.

The negative serves as a permanent record and is not subjected to the hazards of projection.

As many copies can be made as desired, all of which will be of finest quality.

Filter factors for the more commonly used Wratten filters are as follows: Aero 1, 1.7; Aero 2, 2.7; 21, 3.5; 23A, 5.0; 25A, 6.5; 29F, 14.0.

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DA-LITE SCREENS AND MOVIE ACCESSORIES

OSWALD, TEN YEARS OLD, GOING BIG IN 8 AND 16mm

OSWALD the Rabbit, who recently reached his tenth birthday as a professional screen character, is now in 8 and 16mm film being distributed to 2,500 toy dealers and 1,000 department stores in the United States and to licensees in Canada, Africa, South America and England, although he made his appearance in the secondary film field only a few months ago.

Approximately 225 persons have a hand in making each of these subjects, says T. H. Emmett of Hollywood Film Enterprises, licensees for their distribution. The "Oswald" animated cartoons are produced by Walter Lantz, at Universal studios, where 225 persons find permanent employment. Lantz is one of the veterans in this highly specialized field. "Oswald" is his pet.

On the studio cartoon department payroll are story writers, gagmen, artists, animators, in-betweeners and inker-inners.

A story is written for every "Oswald" subject, just as if it were a production to be made with flesh-and-blood characters. Once the plot or idea is decided upon it is turned over to a regular staff of scenario writers, who lay it out in continuity form.

Artists and Writers Too

The gagmen are really comedy writers with artistic ability—or comic artists with writing ability, depending on the way you look at it. Not only must they be able to think up a funny situation, but also they must be able to draw it in a humorous manner. The animated cartoon gagman hasn't any counterpart in the motion picture business. Most of these men come from the newspaper comic-strip field.

When the script is finished it is turned over to other artists who prepare the key illustrations, showing costumes, etc., and the key situations of every scene. These drawings then go to the animators, who make what might be called the pivotal drawings for the picture.

That may need more explanation. In the modern motion picture, prepared in 35mm size, there are sixteen drawings to the foot of film. Suppose the scene is Oswald walking across a room, taking two steps to the foot of film. The animators draw the start, the middle and the finish of each step—really these are key drawings which show the important physical aspects of each motion.

The "in-betweeners" then take these drawings and make the in-between sketches necessary to complete the action.

Animators and "in-betweeners" make their drawings in pencil. When the series is complete for any one scene the drawings are turned over to the "inker-inners," who trace, in ink and paint, the sketches on transparent celluloid.

Real Painters Engaged

Meanwhile a battery of artists is working to prepare the backgrounds —the sets, you might call them— against which the action is played.

In many of the miniature cartoon reels now on the market the old-time penline drawings are used in the background. Lantz uses full wash drawings for his backgrounds, and the artists who prepare these backgrounds are accomplished painters. Many of them have won prizes and worldwide recognition for their work in crayon, water-color, pastel and other mediums.

The transparent celluloid sheets carrying the line drawings are now laid over the backgrounds, and sent to the camera room, where they are photographed in sequence by means of a stop motion camera. Sixteen separate drawings are used to complete every foot of 35mm film.

When the negative is completed in 35mm size it is sent to Hollywood Film Enterprises, where reduction prints are made, in the 16mm and 8mm sizes. The 16mm carries two and a half times as many pictures to the foot as does the 35mm, and the 8mm takes double the number used in the 16mm. An average of 100 men and girls are employed in the process of making the reduction print negative and printing, developing, cutting, packing and shipping the finished positives.

The Hollywood Film Enterprises laboratory is one of the oldest and most up-to-date in Hollywood. It has been in the business of making reduction prints since 1925.

Universal recently has released a short making clear to the layman just how Oswald reaches the screen.

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FILMO TOPICS IS OUT

Bell and Howell's Filmo Topics, Spring issue for 1937, is off the press. It a a highly creditable publication, to its editor, E. A. Reeve, and his associate, R. H. Unsedl, and its publishers as well. There are 16 7⅛ by 10¼ inch pages. Wide use is made of photographs, as becomes a camera publication, offset lithography being employed in reproduction. Succeeding issues will appear in alternate months.

Filmo Topics will be sent, upon request to Bell and Howell, 1801 Larchmont avenue, Chicago, without charge to users of motion picture equipment. The company asks that such requests be accompanied by a statement of the kind of camera and projector owned, and if it be of Bell and Howell make serial numbers be stated.

ENGLER TO ENGLAND

Robert J. Engler, ERPI recording engineer, was tendered a farewell luncheon by his associates at the Hollywood Athletic Club prior to leaving for New York, where he will sail for London. Mr. Engler will assume the duties of recording engineer in England, working with William Bach, executive of Western Electric Company, Ltd., of England.

HERE'S THE ANSWER

SIMPLIFYING FILTER FACTORS

Is it possible to translate filter factor numbers directly into terms of increased diaphragm opening?
R. J. DAUGHERTY,
Hamilton, Ohio.

The way the stops on most 16mm. and 8mm. camera lenses are marked, a factor of two or 2x, which means doubling the exposure, requires opening up the lens by one marked stop. For instance, if your normal unfiltered exposure is f:16, your exposure with a 2x filter would be f:11. With a filter factor of 4, your exposure would be f:8—with a factor of 6, f:6.3, and so on. Factors like 1½ 2½, 3, 5, and so on would be proportionately between stop-markings.

▼

ORTHO AND POSITIVE FILTERS

If I wish to use ortho or positive film, what factors should I allow when using the Aero 1 filter? The K-1 filter? The K-2 filter?
R. J. DAUGHERTY,
Hamilton, Ohio.

You seem to be making the somewhat common mistake of supposing these two films are identical except for speed. They are not, although some of the cheapest types of reversal film, actually positive, have been misleadingly exploited as "ortho type." Although the two types are slightly similar, when viewed in comparison with a panchromatic or superpan type, they are actually noticeably different as to color-sensitivity.

Color-sensitivity, as well as overall speed, determines the factor of any filter on any type of film. Suppose we have a positive-type film which is sensitive to ultra-violet, blue and, to a limited extent, to green, but blind to light of other colors. Perhaps 39/40 of its sensitivity is in the ultra-violet, violet and blue, with 1/40 in the green. Now suppose we use a strong yellow filter which cuts out all the ultra-violet, violet and blue light. This eliminates 39/40 of the light capable of making an exposure on that film, and leaves only 1/40 of the usable light to produce our picture. On that film, that filter has a factor of 40, for we must increase the exposure 40 times.

On the other hand, suppose we use the same yellow filter on a true orthochromatic film, which is sensitive to not only ultra-violet, violet, blue and green light, but also to yellow. Say 4/5 of that film's sensitivity is in the ultra-violet, violet and blue, with the remaining 1/5 in the green and yellow. In this case, we would still have 1/5 of the usable light left after passing through the filter that cut out the ultra-violet, violet and blue. So our filter would be a 5x filter, and we would increase our exposure 5 times, or two-and-a-half stops. Used on a film sensitive to orange, this filter would have a still smaller factor, while on pan or superpan the factor might decrease till it made only a fraction of a stop's difference in the exposure.

Generally speaking, it is not advisable to use any sort of a filter on positive-type film, though a filter like the Kodachrome haze filter, which cuts out only the ultra-violet, might on rare occasions be used. With average ortho film, Eastman's booklet "Wratten Light Filters" gives the filters you mention factors of 3 and 6, respectively. Using them on plenachrome film, I have had excellent results by simply doubling the filters' factors for superpan: making their factors for plenachrome 2½, 3 and 4.

▼

SPLICES FOR WIPE-OFFS

Some time ago in an issue of your magazine a diagonal splicer was illustrated. Making a splice on negative film produced a wipe on the positive. Is this splicer on the market. And who sells it?
H. S. WILSON,
Staten Island, N. Y.

The article you refer to is probably the one in the December, 1934, issue in which Charles G. Clarke, A.S.C., described how he had made a splicer of this type, for use on his own 16mm. films. It was built up from an ordinary small metal print trimmer. Near the cutting edge four pilot pins were located to hold the film in place while cutting, and a metal guide bar dropped down over the film to hold it flat and also to serve as a guide in scraping the film. The two films to be joined were both cut in the same way. The splice itself was made on a patcher located on the flat surface of the trimming board. It consisted of a long metal plate with eight pilot pins to hold the perforations of the two film-strips in proper register. Another bar was hinged to drop over it to apply pressure after the cement had been applied.

More recently, Joe Meyer of the Beverly Hills Home Movies made a splicer of this general type, which he planned to market, though I believe as yet the device has not reached the market commercially.

According to reports reaching us from several who have used splicers of this type for making wipes, the idea works quite well for making splices on negative film, but does not always withstand the strains of projection when the splice-wipe is used on positive or reversal film. After all, if such a splice is to hold, the two pieces of film must be aligned very accurately, and the splice made expertly.

For producing wipes on positive or reversal film, the use of "Fotofade" and its special masking cellulose tape is probably simpler, though the wipe produced is not exactly the same. Incidentally, when making wipes with Fotofade, it is essential to use the special type of cellulose tape supplied for this purpose by the manufacturer; ordinary "scotch tape" is not always satisfactory.

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Clifford Nelson Shows Color Films to Chiefs of Eastman Kodak Co.

Within five years all photography may be done in colors, according to Clifford A. Nelson, director of the Visual Recreation Commission of San Francisco, who was in Rochester, N.Y., recently exhibiting color moving pictures for Eastman Kodak executives.

Vitality and beauty as found in nature can only be photographed well in natural colors, and therein lies the secret of the future success of color photography, according to Mr. Nelson.

The group pictures exhibited were composed of "Trail Song," a photographic history of a boys' packtrain trip into the California High Sierras, which was described in the April issue of this magazine; "Aztec Metropolis," a photographic story of old Aztec ruins in Mexico, and "Recreation in San Francisco," depicting the various phases of recreational activity in a large city.

The first text book on natural color photography to be published, "Natural Color Film," has been written by Mr. Nelson, at the request of a publishing house, and after being reviewed by Eastman Kodak officials in Rochester it was pronounced as being a valuable addition to the science of color photography.

While in Rochester, Mr. Nelson was entertained by Frank W. Lovejoy, president of the Eastman Kodak Company; Dr. C. E. K. Mees, A.S.C., and by M. Herbert Eisenhart, president of Bausch and Lomb Company.

▼

Leica Reproduces Color

The May issue of Leica Photography is in gala dress, with a brilliant four-color front and back cover. This is one of the finest examples to date of what can be done in the line of reproduction with the Kodachrome color process when it is employed with a photographic instrument of precision and advanced design.

Made in South America by Ivan Dmitri, these color photographs have an unusual naturalness and a sense of life about them. For the reproduction process the necessary color separation plates were produced directly from the transparency without intermediate photographic steps.

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SPLICER and REWINDS

CRAIG JUNIOR COMBINATION $8.50
Junior Splicer with two geared rewinds all mounted on 21" board.
CRAIG MOVIE SUPPLY CO.
1053 So. Olive St. Los Angeles, Cal.

PATHEGRAMS BUSY

Castle Films, Inc., editors and national distributors of the Pathegrams copyrighted 16mm and 8mm motion pictures of the Hindenburg explosion and England's coronation, report sales of these films exceeding ten million feet.

Sound and silent versions of the coronation pictures were on sale at the end of May. Production of professional pictures of important events of international interest in sub-standard sizes is a departure.

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Rates; Seven cents a word. Minimum charge, one dollar per insertion.

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WALL SINGLE SYSTEM SOUND CAMERA with direct drive motor, new type movement, variable area high fidelity galvanometer, microphone, amplifier, lenses, tripod and accessories. Complete, ready for operation. Rebuilt silenced and standard Bell & Howell 170 degree Cameras—Hi-speed gear boxes, Bell & Howell Hi-speed shuttles. Two late model Bell & Howell splicers; rebuilt Duplex sound and picture printer; pair used Simplex portable sound projectors with 2000 ft. magazines, Precision, Debrie and Bell & Howell pan and tilt tripods. Bell & Howell 1000 ft., 400 ft. magazines. Motors, sunshades, finders, lenses and all accessories. Write, wire or cable. MOTION PICTURE CAMERA, INC., 723 SEVENTH AVE., NEW YORK, N. Y. CINECAMERA.

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We buy and sell used equipment of every description. Write us your needs.

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AMERICAN CINEMATOGRAPHER 1937 AMATEUR COMPETITION FOR 8mm AND 16mm SUBJECTS

$1000 IN PRIZES

$500 CASH $500 EQUIPMENT

Grand Prize	$200
Photography	50
Color	50
Scenario	50
Home Movie	50
Educational	50
Scenic	50
Total	$500

Details of Equipment to be Announced Later

No Entrance Fee. Original Films Only---No Dupes

No Reduction from 35mm

THE RULES

The contest is world wide and open only to genuine 8mm or 16mm amateurs or amateur clubs.

The contest ends at midnight November 30, 1937. Entries, mailed or expressed, later than that time will not be eligible.

Pictures submitted will be judged by photography, entertainment and/or story value, direction, acting, cutting and composition.

The decision of the judges, among whom there will be prominent cameramen, will be final. Announcement of the awards will be made as soon after the close of the contest as possible and checks and prizes sent to the winners.

Pictures may be submitted either by individual amateur movie makers or they may be submitted by amateur movie clubs. Each entrant must have his entry or entries accompanied by a sworn statement, the blank for which will be forwarded to him to fill in.

Contestants may enter as many subjects as they desire. One entry blank will cover all subjects.

The American Cinematographer reserves the right not to declare a prize for any classification if in the opinion of the judges there is not a picture submitted sufficiently good to be classed as a prize-winner.

The American Cinematographer, subject to the special notice printed below, also retains the right to make duplicates of such prize-winning pictures as it may indicate, for free distribution to clubs and amateur organizations throughout the world.

If you intend to enter the contest please send coupon on this page for official entry blank.

AMERICAN CINEMATOGRAPHER
1782 No. Orange Drive
Hollywood, California

Please send me one of your official entry blanks. I intend to enter a (16mm 8mm) picture in your 1937 contest. I understand my entry must be in your office not later than November 30, 1937.

Name .....

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Special—While there has not been sufficient time in which to work out details it has been agreed in principle that the winner of the American Cinematographer contest unless he choose otherwise shall be a contender in the competition to represent the United States in the International Movie Show supervised by Duncan MacD. Little and sponsored by Columbia University Extension and if successful shall in due course be a contestant for an award in the great final.

One fundamental condition would be imposed upon the winner: That the film be placed in the custody of the International Committee and not be screened except by the committee until such time as the subject is returned to the owner following determination of its final status.

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